HIGHLIGHTS

REVISION NO. 33 Jun 01/10

Pages which have been revised are outlined below, together with the Highlights of the Revision

CH/SE/SU C PAGES	REASON FOR CHANGE	EFFECTIVITY
CHAPTER 38		
L.E.P. 1- 3	Revised to Reflect this revision indicating new,revised, and/or deleted pages	
T. OF C. 2- 4	Revised to reflect this revision	
38-10-00 304- 309, 316, 318- 333	Mod.3008D8079 incorporated **WATER/WASTE - PROVIDE PRESELECTION OF WATER QUANTITY** Minor additions and amplification **NOTE ADDED.**	
38-12-15 01 401, 404	Minor additions and amplification **NEW STEP ADDED**	
38-12-15 02 401, 409	Layout Improved or Effectivity Updated	
38-12-16 01 401, 403	Layout Improved or Effectivity Updated	
38-12-16 02 401, 405	Layout Improved or Effectivity Updated	
38-12-21 401	Layout Improved or Effectivity Updated	
38-13-11 401, 403	Minor additions and amplification **NEW WORK STEP ADDED**	
38-31-00 601- 602	Minor additions and amplification **TEXT REVISED**	
38-32-00 601- 602	Minor additions and amplification **TEXT REVISED**	
38-35-00 02 1- 19	Effectivity updated at the bottom of the page SB 38-2026 03 incorporated **WATER/WASTE - RECIRCULATION/VACUUM WASTE SYST**	

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CH/SE/SU C PAGES	REASON FOR CHANGE	EFFECTIVITY
	EM - INSTALL A 4 INCH WASTE VALVE	
38-35-00 705- 710, 713- 714	Minor additions and amplification CLEANING PROCEDURE AMENDED.	
38-35-39 402, 404- 405	Effectivity updated at the bottom of the page Effectivity updated in the text	

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CHAPTER 38

WATER/WASTE

LIST OF EFFECTIVE PAGES

N, R or D indicates pages which are New, Revised or Deleted respectively
Remove and insert the affected pages and complete the Record of Revisions and the Record of Temporary Revisions as necessary

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OF TEMP.			
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38-00-00		2	Dec01/90
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38-10-00		301	Jun01/09
38-10-00		302	Jun01/09
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38-10-00	R	308	Jun01/10
38-10-00	R	309	Jun01/10
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CHAPTER 38

WATER/WASTE

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NOZZLE-RINSE	38-35-28			
Maintenance Practices			201	ALL
Cleaning of Rinse Nozzle			201	ALL
WATER SEPARATOR	38-35-29			
Removal/Installation			401	ALL
LOGIC CONTROL UNIT	38-35-31			
Removal/Installation			401	ALL
Adjustment/Test			501	ALL
Logic Control Unit Functional Test			501	ALL
Waste Level Sensor Functional Test				
WASTE LEVEL SENSOR	38-35-32			
Removal/Installation			401	ALL
FLUSH CONTROL UNIT	38-35-33			
Removal/Installation			401	ALL
ALTITUDE PRESSURE SWITCH	38-35-35			
Removal/Installation			401	ALL
WATER VALVE	38-35-37			
Removal/Installation			401	ALL
DRAIN AND CAP ASSY	38-35-39			
Removal/Installation			401	ALL
AIR SUPPLY	38-40-00			
Description and Operation			1	ALL
Component Location			1	ALL
Servicing			301	ALL
System Pressurization			301	ALL
Checking Pressure			302	ALL
Depressurize Air Supply System			302	ALL
Adjustment/Test			501	ALL
SHUTTLE VALVE	38-41-11			

SUBJECT	CH/SE/SU	C	PAGE	EFFECTIVITY
Removal/Installation			401	ALL
AIR FILTER	38-41-12			
Removal/Installation			401	ALL
PRESSURE REDUCING VALVE	38-41-13			
Removal/Installation			401	ALL
Adjustment/Test			501	ALL
CHECK VALVE	38-41-14			
Removal/Installation			401	ALL
AIR COMPRESSOR	38-41-15			
Removal /Installation			401	ALL
PRESSURE SWITCH	38-41-17			
Removal/Installation			401	ALL
AIR PRESSURE TRANSMITTER	38-42-11			
Removal/Installation			401	ALL
AIR PRESSURE INDICATOR	38-42-12			
Removal/installation			401	ALL
Pressure gage 21MA			401	ALL
MICROSWITCH	38-42-13			
Removal/Installation			401	ALL

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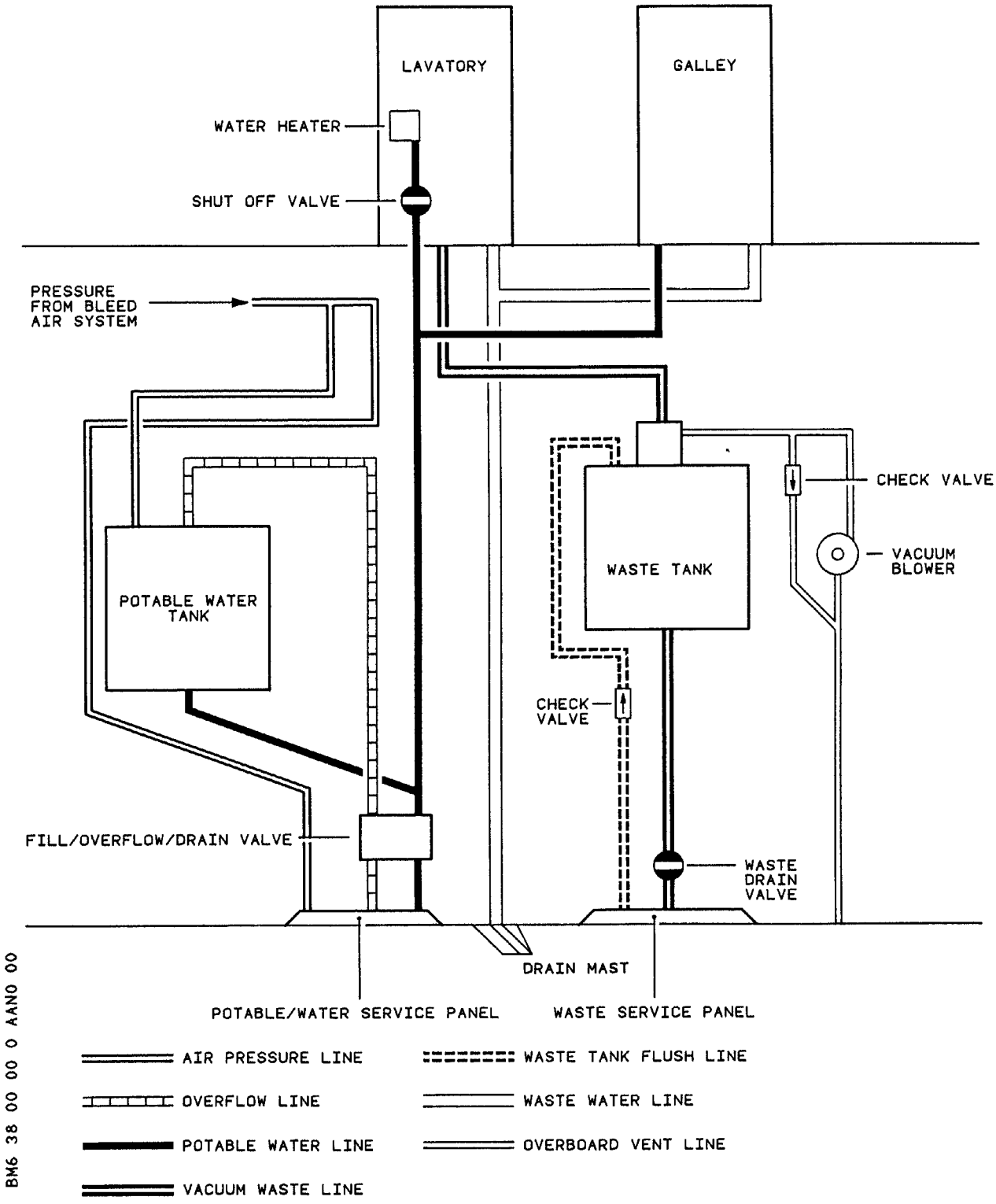
1. General
The water/waste system consists of a pressurized fresh water system and a waste disposal system.

2. Description
(Ref. Fig. 001)

A. Potable Water System (Ref. 38-10-00)
The potable water system supplies the galleys and lavatories with potable water from water tanks. The maximum storage capacity of each water tank is 200 l (52 US gal.).

B. Water Waste System (Ref. 38-35-00)
(1)Toilet System
The toilet system carries waste matter and liquids from all the toilets into two waste tanks. The vacuum drain type toilet units consist of the toilet bowl assemblies and a rinse/flush/drain installation.
(2)Waste Water Drain System
The waste water drain system carries waste water from lavatory washbasins and galley sinks to heated drain masts for discharge overboard.

C. Air Supply System (Ref. 38-40-00)
A compressed air pressurization system distributes the potable water. The compressed air can be supplied by bleed air from the engines, the Auxiliary Power Unit (APU) or, if fitted, an onboard compressor. When parked, with the engines and APU shut down, compressed air can be obtained from a ground supply unit.



System Diagram
Figure 001

1. General

The potable water system transfers water from three water tanks, through a distribution system, to the water faucets in the lavatory compartments, to the galleys and to the vacuum toilets.
The max. amount of water available is 600 l (156 US gal.).
The system comprises the following subsystems:

- Water Storage (38-11-00)
- Distribution (38-12-00)
- Quantity Indicating (38-13-00)
- Water Draining (38-14-00)

R **ON A/C 101-200,

2. Description

A. Water Storage

The water storage system comprises three water tanks, one fill/overflow and drain valve and a potable water service panel located on RH lower fuselage near the wing box.

R **ON A/C 001-100,

2. Description

A. Water Storage

The water storage system comprises three water tanks, one fill/overflow and drain valve (18MA) and a potable water service panel located on RH lower fuselage near the wing box. A preselection system is installed.

R **ON A/C ALL

B. Distribution

The water distribution system comprises piping, two motorized system shut-off valves (17MD, 18MD),water faucets in the lavatories and galleys, water heaters and manual shutoff valves in the sanitary unit cabinets.

R **ON A/C 101-200,

C. Quantity Indicating

The quantity indication system consists of a transmitter and indicators, one located on a combi gage at the purser's panel and one at the potable water service panel.

R **ON A/C 001-100,

C. Quantity Indicating
The quantity indication system consists of a transmitter, a quantity indicator located on a combi gage at the purser's panel and an indicator light **TANK FULL** on the potable water service panel.

R **ON A/C 101-200,

D. Water Draining
Water draining is achieved through the fill/overflow and drain valve and the motorized system drain valve (6MP).

R **ON A/C 001-100,

D. Water Draining
Water draining is achived through the fill/overflow and drain valve (18MA) and the motorized system drain valve (6MP).

WARNING : ALWAYS WEAR RUBBER GLOVES, GOGGLES AND PROTECTIVE CLOTHES WHEN YOU DO THIS PROCEDURE.
WARNING : OBEY THE MANUFACTURER'S INSTRUCTIONS WHEN YOU USE THESE SPECIAL MATERIALS. THESE MATERIALS ARE DANGEROUS.
CAUTION : DO NOT GET THE FLUID ON YOUR SKIN OR IN YOUR EYES. IF YOU DO:
- FLUSH IT AWAY WITH CLEAN WATER
- GET MEDICAL AID.

R 1. Reason for the Job
R A. Potable Water Disinfection
R B. Sampling of the Potable Water

NOTE : Four procedures are given here that you can use for disinfection of the potable water system:
- Disinfection with Calcium Hypochlorite or Sodium Hypochlorite
- Disinfection with Hydrogen Peroxide (H2O2) HERISIL or H BIO T50
- Disinfection with Sodium Hypochlorite mixed with a Water Disinfection Doser to the potable water
- Disinfection with Hydrogen Peroxide (H2O2) HERISIL or H BIO T50 mixed with a Water Disinfection Doser to the potable water.

NOTE : The airline can make the decision which of the four procedures they will use.

2. Disinfection of the Potable Water Tank and Distribution System with Calcium Hypochlorite (Material No. 14-003E) or Sodium Hypochlorite (Material No. 14-003F)

A. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform, 1 m (3 ft.)
(2)	Circuit Breaker Safety Clips and Tags
(3)	Warning Notices
(4)	Containers - suitable for potable water
(5)	Hand Pump Equipment Suction-Force Pump, delivery pressure not exceeding 50 psi.
(6)	Water Service Vehicle.
(7)	Hose-Vinyl
(8)	Test Strip for free Chlorine
(9)	Container 50 l (13 US gal.)
(10)Material No. 14-003 E	Disinfectants (Ref. 20-31-00)
(11)Material No. 14-003 F	Disinfectants (Ref. 20-31-00)

Referenced Procedures

- 12-15-38, P. Block 1 Replenishing Potable Water
- 12-24-38, P. Block 1 Potable Water System - Draining
- 24-41-00, P. Block 301 AC External Power Control
- 25-30-00, P. Block 301 Buffet and Galley
- 38-12-23, P. Block 201 Water Filter
- 38-40-00, P. Block 301 Air Supply

B. Procedure

(1)Job Set-Up

(a)Position access platform 1 m (3 ft.) and open potable water service panel access door 136BR.

(b)Connect the electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).

(c)Make sure that the electronics racks ventilation is correct.

(d)Open the tank fill connection on the water service panel.

(e)Position a container below the access door.

(f)Connect the hose-vinyl to the drain connection on the potable water service panel and put it in the container below the access door.

(g)Connect the hose-vinyl to the waste-water drain masts.

(h)Position a container 50 l (13 US gal.) under each drain mast.

(j)Drain the potable water system (Ref. 12-24-38, P. Block 1).

(k)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2
800VU	WATER SYSTEM	1MA	H5
800VU	WATER SYSTEM	1MD	H6
800VU	WATER SYSTEM	1MP	H7

(2)Preparation of the disinfectant solution

(a)Before you start the disinfection procedure:

- Do an analysis of the potable water that you will use to fill the potable water system.
- Make sure that the result of the analysis is within the limits for drinking water given by the local authority.

(b)Mix disinfectant (Mat. No. 14-003E) or disinfectant (Mat. No. 14-003F) with water in a 12 l (3.17 US gal.) container as given in the following table. The water should have a temperature of 20 deg C (68 deg F).

NOTE : When this solution is mixed with 720 l (85 US gal.) of water, it will produce a solution with a concentration of 100 ppm.

Number of Tanks	Usable tank volume in l (US gal)	Volume of water needed for disinfection solution in 1 (US gal)	Calcium Hypochlorite (70%) (CML 14-003E) in g (ounces)	Sodium Hypochlorite (13%) (CML 14-003F) in g (ounces)
R 3	600 (159)	720 (190)	106 (3.74)	460 (16.23)

(c)Let the solution dissolve for 1 hour.
(d)Pour the solution through a filter into a clean container.
(e)Mix the solution with 720 l (190 US gal.) of water to make the final disinfectant solution.

(3)Disinfection of the potable water system

WARNING : MAKE SURE THAT THE EQUIPMENT YOU USE FOR THIS PROCEDURE IS CLEAN AND APPROVED FOR THE POTABLE WATER SYSTEM. IF NOT, IT CAN CAUSE CONTAMINATION OF THE POTABLE WATER SYSTEM.

(a)Make sure that all potable water shutoff valves are open.
(b)Make sure that the switch on each water heater is set to the OFF position.
(c)Put a warning notice in position to tell persons not to use the potable water system.
(d)Open the galley water filter housing. Remove the filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).

CAUTION : WATER PRESSURE MUST NOT EXCEED 3.45 BAR (50 PSI).

(e)Fill the potable water system with the disinfectant solution, using a hand pump or a water service vehicle, until the solution flows out of the overflow port (Ref. 12-15-38, P. Block 1).
(f)Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
(g)Bleed the potable water system:
1 In each lavatory, flush the toilet 15 times.
2 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
3 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
4 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal) flow out.
(h)Close the potable water shutoff valve in the lavatories and galleys.
(j)Depressurize the potable water system (Ref. 38-40-00, P. Block 301).
(k)Top up the potable water system with disinfectant solution, using the hand pump or the water service vehicle, until the water flows out of the overflow port.

NOTE : This step replaces the solution lost through the water faucets.

(l)Leave the solution for 1 hour (100 ppm concentration) in the potable water system.
(m)Open the potable water shutoff valve in the lavatories and galleys.
(n)Repeat the steps (f) to (k).
(p)Leave the disinfection solution in the potable water system for a further 0.5 hour.
(q)Open the potable water shutoff valve in the lavatories and galleys.
(r)Disconnect the hand pump or the water service vehicle and drain the disinfection solution from the potable water system (Ref. 12-24-38, P. Block 1).

NOTE : For disposal of used disinfection solution, refer to national or local authority regulations.

(s)Remove safety clips and tags and close circuit breakers that were opened in Para. 1.B.(1)(k).

(t)Flush the potable water system with clean water after the disinfection:

1 Replenish the potable water system (Ref. 12-15-38, P. Block 1).

2 Pressurize the potable water system (Ref. 38-40-00, P. Block 301).

3 Operate the toilets, the water faucets in the lavatories and galleys to flush them:

a Operate each toilet and flush 15 times.

b In each lavatory, operate the cold water faucet and let approximately 3 liters (0.8 US gal.) flow out.

c In each lavatory, operate the hot water faucet and let approximately 3 liters (0.8 US gal.) flow out.

d In the galleys, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 liters (1.3 US gal) flow out.

(u)Get a sample of the potable water for microbiological analysis.

NOTE : Recommended max. levels:
Refer to national or local authority regulations for valid limits.

(v)If the number of colony forming units found are out of limits given by local authorities, repeat steps (3)(e) thru (v).

(4)Test for any remaining disinfectant

(a)Use a test strip for free chlorine to test the potable water.

1 Let the water flow over the test strip from the water faucets in the galleys and lavatories.

NOTE : Obey the manufacturer's instructions when you use the test strip.

(b)If the test shows that there is remaining disinfectant in the water, flush the system again.

R NOTE : The remaining disinfectant (chlorine) in the system must not be
R more than the required amount given by the national health
R authority for drinking water.

(5)Close-Up

(a)Open the galley water filter housing. Install the new filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).

(b)Remove the warning notices.

(c)Disconnect the hoses-vinyl from the waste-water drain masts.

(d)Remove all containers.

(e)Remove the hose-vinyl from the drain connection on the potable water service panel.

(f)Close the tank fill connection on the water service panel.

(g)Close the potable water service panel access door 136BR and remove the access platform.
(h)Make sure that the switches on the water heaters in the lavatories (if installed) are set to the ON position.
(j)De-energize the aircraft electrical network and disconnect the electrical ground power unit (Ref. 24-41-00, P. Block 301).
(k)Make sure that the work area is clean and clear of tools and miscellaneous items of equipment.

3. Disinfection of the Potable Water Tank and Distribution System with Hydrogen Peroxide (Material No. 14-003H or 14-003J)

A. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform, 1 m (3 ft.)
(2)	Circuit Breaker Safety Clips and Tags
(3)	Warning Notices
(4)	Containers - suitable for potable water
(5)	Hand Pump Equipment Suction-Force Pump, delivery pressure not exceeding 50 psi
(6)	Water Service Vehicle
(7)	Hose-Vinyl
(8)	Container 50 l (13 US gal.)
(9)Material No. 14-003 H	Disinfectants (Ref. 20-31-00)
(10)Material No. 14-003 J	Disinfectants (Ref. 20-31-00)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 25-30-00, P. Block 301	Buffet and Galley
- 38-12-23, P. Block 201	Water Filter
- 38-40-00, P. Block 301	Air Supply

B. Procedure

(1)Job Set-Up
(a)Position the access platform 1 m (3 ft.) and open the potable water service panel access door 136BR.
(b)Connect the electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).
(c)Make sure that the electronics racks ventilation is correct.
(d)Open the tank fill connection on the water service panel.
(e)Position a container below the access door.
(f)Connect the hose-vinyl to the drain connection on the potable water service panel and put it in the container below the access door.
(g)Connect the hose-vinyl to the waste-water drain masts.
(h)Position a container 50 l (13 US gal.) under each drain mast.

(j)Drain the potable water system (Ref. 12-24-38, P. Block 1).
(k)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2
800VU	WATER SYSTEM	1MA	H5
800VU	WATER SYSTEM	1MD	H6
800VU	WATER SYSTEM	1MP	H7

(2)Preparation of the disinfectant solution
(a)Before you start the disinfection procedure:
- Do an analysis of the potable water that you will use to fill the potable water system
- Make sure that the result of the analysis is within the limits for drinking water given by the local authority.

(b)Mix disinfectant (Mat. No. 14-003H) or disinfectant (Mat. No. 14-003J) with water at a temperature of 20 deg. C (68 deg. F) as given in the following table:

Number of Tanks	Usable tank volume in l (US gal)	Volume of water needed for disinfection solution in 1 (US gal) *	Pure H2O2 in g (oz) **	Disinfectant For 50% H2O2 Concentration in 1 (US gal) ***
3	600 (159)	740 (195,4)	370 (13.1)	0.62 (0.16)

NOTE : * The given volume includes the volume of the potable water tank and the distribution system.
** The mass is calculated for pure hydrogen peroxide (H2O2).
*** The value given in the table is for disinfectant which contains approximately 50% active hydrogen peroxide. You must obey the manufacturer's instructions when you use this product.

NOTE : If you have remaining disinfectant solution after the disinfection procedure, do not use this disinfectant solution again.

(3)Disinfection of the potable water system

WARNING : MAKE SURE THAT THE EQUIPMENT YOU USE FOR THIS PROCEDURE IS CLEAN AND APPROVED FOR THE POTABLE WATER SYSTEM. IF NOT, IT CAN CAUSE CONTAMINATION OF THE POTABLE WATER SYSTEM.

(a)Make sure that all potable water shutoff valves are open.
(b)Make sure that the switch on each water heater is set to the OFF position.
(c)Put a warning notice in position to tell persons not to use the potable water system.

(d)Open the galley water filter housing. Remove the filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).

CAUTION : WATER PRESSURE MUST NOT EXCEED 3.45 BAR (50 PSI).

(e)Fill the potable water system with the disinfectant solution, using a hand pump or a water service vehicle, until the solution flows out of the overflow port (Ref. 12-15-38, P. Block 1).
(f)Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
(g)Bleed the potable water system:
1 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
2 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
3 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal) flow out.
4 Flush the toilets 15 times.
(h)Close the potable water shutoff valve in the lavatories and galleys.
(j)Depressurize the potable water system (Ref. 38-40-00, P. Block 301).
(k)Top up the potable water system with disinfectant solution, using the hand pump or the water service vehicle, until the water flows out of the overflow port.

NOTE : This step replaces the solution lost through the water faucets.

(l)Leave the disinfectant solution in the potable water system for 1 hour.
(m)Open the potable water shutoff valve in the lavatories and galleys.
(n)Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
(p)Flush the potable water system:
1 Start the procedure at the potable water equipment at the back of the aircraft and continue to the front.
2 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal) flow out.
3 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal) flow out.
4 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.
5 Flush the toilets 15 times.
(q)Leave the disinfectant in the potable water system for a further 0.5 hour.
(r)Disconnect the water service vehicle or hand pump with the disinfectant solution from the water service panel.
(s)Remove the safety clips and tags and close the circuit breakers that were opened in Para. 2.B.(1)(k).
(t)Drain the potable water system (Ref. 12-24-38, P. Block 1).

NOTE : For disposal of used disinfection solution, refer to national or local authority regulations.

(u)Flush the potable water system with clean water (without disinfectant):
1 Replenish the potable water system (Ref. 12-15-38, P. Block 1).
2 Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
3 In each lavatory, operate the cold water faucet and let approximately 3 liters (0.8 US gal.) flow out.
4 In each lavatory, operate the hot water faucet and let approximately 3 liters (0.8 US gal.) flow out.
5 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal) flow out.
6 Flush the toilets 15 times.
(v)Do steps (t) and (u) a minimum of three times to make sure that there is no remaining disinfectant in the potable water system.
(w)Get a sample of the potable water for microbiological analysis.

NOTE : Recommended max. levels:
Refer to national or local authority regulations for valid limits.

(x)If the number of colony forming units found are out of the limits given by local authorities, repeat steps (3)(e) thru (3)(x).

(4)Close-Up

(a)Open the galley water filter housing. Install the new filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).
(b)Remove the warning notices.
(c)Disconnect the hoses-vinyl from the waste-water drain masts.
(d)Remove all containers.
(e)Remove the hose-vinyl from the drain connection on the potable water service panel.
(f)Close the tank fill connection on the water service panel.
(g)Close the potable water service panel access door 136BR and remove the access platform.
(h)Make sure that the switches on the water heaters in the lavatories (if installed) are set to the ON position.
(j)De-energize the aircraft electrical network and disconnect the electrical ground power unit (Ref. 24-41-00, P. Block 301).
(k)Make sure that the work area is clean and clear of tools and miscellaneous items of equipment.

4. Disinfection of the Potable Water Tank and Distribution System with Elsil (Material No. 14-003K)

A. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform, 1 m (3 ft.)
(2)	Circuit Breaker Safety Clips and Tags
(3)	Warning Notices
(4)	Containers - suitable for potable water

ITEM	DESIGNATION
(5)	Hand Pump Equipment Suction-Force Pump, delivery pressure not exceeding 50 psi
(6)	Water Service Vehicle
(7)	Hose-Vinyl
(8)	Container 50 l (13 US gal.)
(9)Material No. 14-003 K	Disinfectants (Ref. 20-31-00)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 25-30-00, P. Block 301	Buffet and Galley
- 38-12-23, P. Block 201	Water Filter
- 38-40-00, P. Block 301	Air Supply

B. Procedure

(1)Job Set-Up
(a)Position the access platform 1 m (3 ft.) and open the potable water service panel access door 136BR.
(b)Connect the electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).
(c)Make sure that the electronics racks ventilation is correct.
(d)Open the tank fill connection on the water service panel.
(e)Position a container below the access door.
(f)Connect the hose-vinyl to the drain connection on the potable water service panel and put it in the container below the access door.
(g)Connect the hose-vinyl to the waste-water drain masts.
(h)Position a container 50 l (13 US gal.) under each drain mast.
(j)Drain the potable water system (Ref. 12-24-38, P. Block 1).
(k)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2
800VU	WATER SYSTEM	1MA	H5
800VU	WATER SYSTEM	1MD	H6
800VU	WATER SYSTEM	1MP	H7

(2)Preparation of the disinfectant solution
(a)Before you start the disinfection procedure:
- Do an analysis of the potable water that you will use to fill the potable water system
- Make sure that the result of the analysis is within the limits for drinking water given by the local authority.

(b)Mix disinfectant (Mat. No. 14-003K) with water at a temperature of 20 deg. C (68 deg. F) as given in the following table:

Number of Tanks	Usable tank volume in l (US gal)	Volume water needed for disinfection in 1 (US gal) *	Pure H2O2 in g (oz)	Disinfectant in l (US gal) (for 3% H2O2 concentration)
3	600 (159)	740 (195,4)	370 (13.1)	10,2777 (2,72)

NOTE : * The given volume includes the volume of the potable water tank and the distribution system.
** The mass is calculated for pure hydrogen peroxide (H2O2).
*** The value given in the table is for disinfectant which contains approximately 3% active hydrogen peroxide. You must obey the manufacturer's instructions when you use this product.

NOTE : If you have remaining disinfectant solution after the disinfection procedure, do not use this disinfectant solution again.

(3)Disinfection of the potable water system

WARNING : MAKE SURE THAT THE EQUIPMENT YOU USE FOR THIS PROCEDURE IS CLEAN AND APPROVED FOR THE POTABLE WATER SYSTEM. IF NOT, IT CAN CAUSE CONTAMINATION OF THE POTABLE WATER SYSTEM.

(a)Make sure that all potable water shutoff valves are open.
(b)Make sure that the switch on each water heater is set to the OFF position.
(c)Put a warning notice in position to tell persons not to use the potable water system.
(d)Open the galley water filter housing. Remove the filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).

CAUTION : WATER PRESSURE MUST NOT EXCEED 3.45 BAR (50 PSI).

(e)Fill the potable water system with the disinfectant solution, using a hand pump or a water service vehicle, until the solution flows out of the overflow port (Ref. 12-15-38, P. Block 1).
(f)Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
(g)Bleed the potable water system:
1 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
2 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
3 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal) flow out.
4 Flush the toilets 15 times.
(h)Close the potable water shutoff valve in the lavatories and galleys.

(j)Depressurize the potable water system (Ref. 38-40-00, P. Block 301).
(k)Top up the potable water system with disinfectant solution, using the hand pump or the water service vehicle, until the water flows out of the overflow port.

NOTE : This step replaces the solution lost through the water faucets.

(l)Leave the disinfectant solution in the potable water system for 1 hour.
(m)Open the potable water shutoff valve in the lavatories and galleys.
(n)Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
(p)Flush the potable water system:
1 Start the procedure at the potable water equipment at the back of the aircraft and continue to the front.
2 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal) flow out.
3 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal) flow out.
4 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.
5 Flush the toilets 15 times.
(q)Leave the disinfectant in the potable water system for a further 0.5 hour.
(r)Disconnect the water service vehicle or hand pump with the disinfectant solution from the water service panel.
(s)Remove the safety clips and tags and close the circuit breakers that were opened in Para. 2.B.(1)(k).
(t)Drain the potable water system (Ref. 12-24-38, P. Block 1).

NOTE : For disposal of used disinfection solution, refer to national or local authority regulations.

(u)Flush the potable water system with clean water (without disinfectant):
1 Replenish the potable water system (Ref. 12-15-38, P. Block 1).
2 Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
3 In each lavatory, operate the cold water faucet and let approximately 3 liters (0.8 US gal.) flow out.
4 In each lavatory, operate the hot water faucet and let approximately 3 liters (0.8 US gal.) flow out.
5 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal) flow out.
6 Flush the toilets 15 times.
(v)Do steps (t) and (u) a minimum of three times to make sure that there is no remaining disinfectant in the potable water system.
(w)Get a sample of the potable water for microbiological analysis.

NOTE : Recommended max. levels:
Refer to national or local authority regulations for valid

limits.

(x)If the number of colony forming units found are out of the limits given by local authorities, repeat steps (3)(e) thru (3)(x).

(4)Close-Up

R (a)Open the galley water filter housing. Install the new filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).
R (b)Remove the warning notices.
R (c)Disconnect the hoses-vinyl from the waste-water drain masts.
R (d)Remove all containers.
R (e)Remove the hose-vinyl from the drain connection on the potable water service panel.
R (f)Close the tank fill connection on the water service panel.
R (g)Close the potable water service panel access door 136BR and remove the access platform.
R (h)Make sure that the switches on the water heaters in the lavatories (if installed) are set to the ON position.
R (j)De-energize the aircraft electrical network and disconnect the electrical ground power unit (Ref. 24-41-00, P. Block 301).
R (k)Make sure that the work area is clean and clear of tools and miscellaneous items of equipment.

R 5. Disinfection of the Water Tank and Distribution System with Sodium Hypochlorite (Material No. 14-003F) using the Water Disinfection Doser

R A. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform, 1 m (3 ft.)
(2)	Circuit Breaker Safety Clips and Tags
(3)	Warning Notices
(4)	Water Service Vehicle
(5)	Hose-Vinyl
(6)	Test Strip for free Chlorine
(7)	Container 50 l (13 US gal.)
(8)	Container 30 l (8 US gal.)
(9)98F38108656000	Water Disinfection Doser
(10)Material No. 14-003 F	Disinfectants (Ref. 20-31-00)

R Referenced Procedures

R - 12-15-38, P. Block 1	Replenishing Potable Water
R - 12-24-38, P. Block 1	Potable Water System - Draining
R - 24-41-00, P. Block 301	AC External Power Control
R - 25-30-00, P. Block 301	Buffet and Galley
R - 38-12-23, P. Block 201	Water Filter
R - 38-40-00, P. Block 301	Air Supply

R B. Procedure

R (1)Job Set-Up
R (a)Position the access platform 1 m (3 ft.) and open the potable water service panel access door 136BR.
R (b)Connect the electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).
R (c)Make sure that the electronics racks ventilation is correct.
R (d)Open the tank fill connection on the water service panel.
R (e)Position a container below the access door.
R (f)Connect the hose-vinyl to the drain connection on the potable water service panel and put it in the container below the access door.
R (g)Connect the hose-vinyl to the waste-water drain masts.
R (h)Position a container 50 l (13 US gal.) under each drain mast.
R (j)Drain the potable water system (Ref. 12-24-38, P. Block 1).
R (k)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2
800VU	WATER SYSTEM	1MA	H5
800VU	WATER SYSTEM	1MD	H6
800VU	WATER SYSTEM	1MP	H7

R (2)Preparation of the Water Disinfectant Doser (Ref. Fig. 301)
R (a)Before you start the disinfection procedure:
R 1 Do an analysis of the potable water that you will use to fill the potable water system.
R 2 Make sure that the result of the analysis is within the limits for drinking water given by the local authority.
R (b)Before you use the Water Disinfection Doser, make sure that it is correctly calibrated, clean and disinfected (refer to the manufacturer's instructions).
R (c)Put the Water Disinfection Doser in position at the potable water service panel 136BR.
R (d)Connect the water supply hose to the water inlet of the Water Disinfection Doser.
R (e)Put the water outlet hose of the Water Disinfection Doser into a a container 30 l (8 US gal.).
R (f)Put the small chemical hose with filter into the container with the disinfection solution.
R (g)At the Water Disinfection Doser:

R CAUTION : THE WATER PRESSURE MUST NOT BE MORE THAN 3.45 BARS (50.0 PSI). A WATER PRESSURE MORE THAN 3.45 BARS (50.0 PSI) CAN CAUSE DAMAGE.

R 1 Adjust the water pressure to between 3.0 bar (43.5 psi) and 3.45 bar (50.0 psi).
R 2 For a sodium hypochlorite solution with 13 percent free chlorine, adjust the proportional doser to a value of 0.07 percent.
R 3 Turn the inlet valve (membrane valve) slightly to open it,

R but do not fully open it at this time.
R (h)Bleed the Water Disinfection Doser:
R 1 Press the bleed button on top of the doser unit to bleed the system.
R 2 Keep the bleed button pushed until only water and no air comes from the bleed button.
R 3 Release the bleed button.
R (j)Open the outlet valve of the Water Disinfection Doser.
R (k)Slowly open the inlet valve (membrane valve) until it is fully open (the Water Disinfection Doser is self-priming).
R (l)Operate the Waster Disinfection Doser until the disinfectant starts to flow into the doser unit without air bubbles in the plastic tube.

R NOTE : You can see the disinfectant flow through the plastic tube. A "clickclack" noise is typical for the **DOSATRON** unit when it is in operation.

R (m)Operate the Water Disinfection Doser for 2-3 min. and let approximately 20 l (5.28 US gal.) of disinfection solution flow into the container 30 l (8 US gal.).
R (n)Close the outlet valve of the Water Disinfection Doser.

R (3)Disinfection of the potable water system

R **WARNING : MAKE SURE THAT THE EQUIPMENT YOU USE FOR THIS PROCEDURE IS CLEAN AND APPROVED FOR THE POTABLE WATER SYSTEM. IF NOT, IT CAN CAUSE CONTAMINATION OF THE POTABLE WATER SYSTEM.**

R (a)Make sure that all potable water shutoff valves are open.
R (b)Make sure that the switch on each water heater is set to the OFF position.
R (c)Put a warning notice in position to tell persons not to use the potable water system.
R (d)Open the galley water filter housing. Remove the filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).
R (e)Connect the outlet hose of the Water Disinfection Doser to the fill/drain port on the potable water service panel.
R (f)Fill the potable water system until the disinfection solution flows from the overflow port (Ref. 12-15-38, P. Block 1).
R (g)Stop the Water Disinfection Doser.
R (h)Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
R (j)Bleed the potable water system:
R 1 In each lavatory, flush the toilet 15 times.
R 2 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
R 3 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
R 4 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal) flow out.
R (k)Close the potable water shutoff valve in the lavatories and galleys.

R (l)Depressurize the potable water system (Ref. 38-40-00, P. Block 301).
R (m)Top up the potable water system:
R 1 Start the Water Disinfection Doser and fill the potable water system until the disinfection solution flows from the overflow port (Ref. 12-15-38, P. Block 1).

R NOTE : This step replaces the solution lost through the water faucets.

R (n)Leave the disinfection solution in the potable water system for 1 hour.
R (p)Open the potable water shutoff valve in the lavatories and galleys.
R (q)Repeat the steps (h) to (m).
R (r)Leave the disinfection solution in the potable water system for a further 0.5 hour.
R (s)Open the potable water shutoff valve in the lavatories and galleys.
R (t)Disconnect the Water Disinfection Doser and drain the disinfection solution from the potable water system (Ref. 12-24-38, P. Block 1).

R NOTE : For disposal of used disinfection solution, refer to national or local authority regulations.

R (u)Remove the safety clips and tags and close the circuit breakers that were opened in Para. 3.B.(1)(k).
R (v)Flush the potable water system after disinfection:
R 1 Replenish the potable water system (Ref. 12-15-38, P. Block 1).
R 2 Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
R 3 Operate the toilets and the water faucets in the lavatories and galleys to flush them:
R a Operate each toilet and flush 15 times.
R b In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal) flow out.
R c In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal) flow out.
R d In the galleys, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.
R (w)Get a sample of the potable water for microbiological analysis.

R NOTE : Recommended max. levels:
R Refer to national or local authority regulations for valid limits.

R (x)If the number of colony forming units found are out of the limits given by local authorities, repeat steps (3)(e) thru (x).

R (4)Test for any remaining disinfectant
R (a)Use a test strip for free chlorine to test the potable water:
R 1 Let the water flow over the test strip from the water faucets in the galleys and lavatories.

R NOTE : Obey the manufacturer's instructions when you use the test strip.

(b)If the test shows that there is remaining disinfectant in the water, flush the system again.

R NOTE : The remaining disinfectant (chlorine) in the system must not be
R more than the required amount given by the national health
R authority for drinking water.

(5)Close-Up
(a)Open the galley water filter housing. Install the new filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).
(b)Remove the warning notices.
(c)Disconnect the hoses-vinyl from the waste-water drain masts.
(d)Remove all containers.
(e)Remove the hose-vinyl from the drain connection on the potable water service panel.
(f)Close the tank fill connection on the water service panel.
(g)Close the potable water service panel access door 136BR and remove the access platform.
(h)Make sure that the switches on the water heaters in the lavatories are set to the ON position.
(j)De-energize the aircraft electrical network and disconnect the electrical ground power unit (Ref. 24-41-00, P. Block 301).
(k)Make sure that the work area is clean and clear of tools and miscellaneous items of equipment.

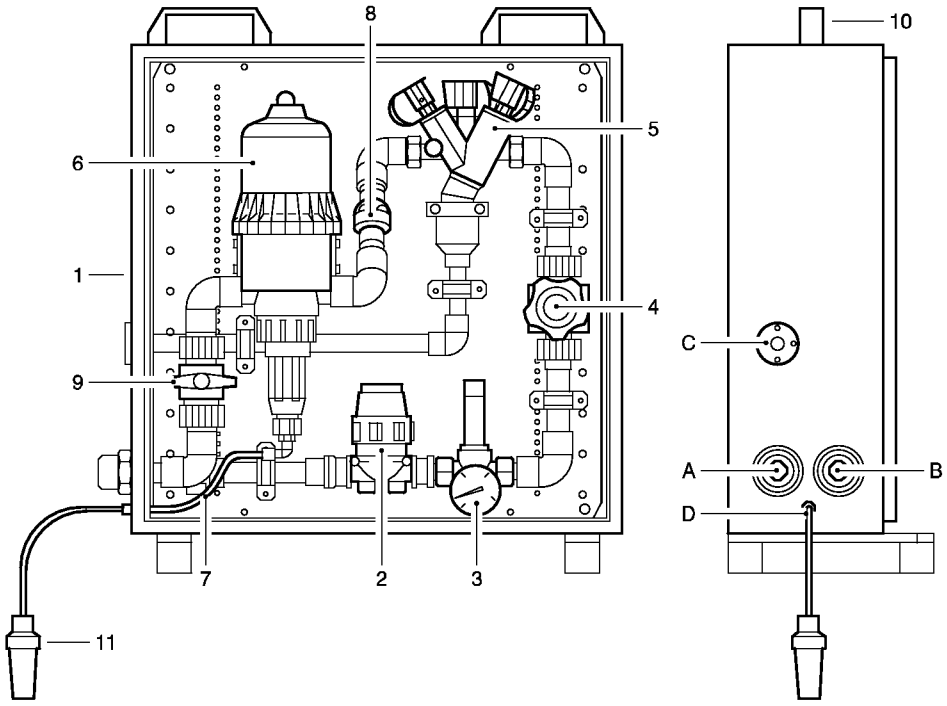
6. Disinfection of the Water Tank and Distribution System with Hydrogen Peroxide (Material No. 14-003H or 14003J) using the Water Disinfection Doser

A. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform, 1 m (3 ft.)
(2)	Circuit Breaker Safety Clips and Tags
(3)	Warning Notices
(4)	Water Service Vehicle
(5)	Hose-Vinyl
(6)	Container 50 l (13 US gal.)
(7)	Container 30 l (8 US gal.)
(8)98F38108656000	Water Disinfection Doser
(9)Material No. 14-004 H	Disinfectants (Ref. 20-31-00)
(10)Material No. 14-003 J	Disinfectants (Ref. 20-31-00)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 25-30-00, P. Block 301	Buffet and Galley
- 38-12-23, P. Block 201	Water Filter
- 38-40-00, P. Block 301	Air Supply



THE WATER DISINFECTION DOSER IS AN ASSEMBLY OF OFFICIAL AVAILABLE PARTS AND COMPRISES:

- TUBES, HOSES MADE OF DISINFECTIONS WATER RESISTANCE MATERIAL (RESISTANT AGAINST H_2O_2, 500ppm AND CHLORINE, 100ppm)
- MANIFOLDS

1	BOX
2	FILTER ELEMENT
3	PRESSURE REDUCER WITH MANOMETER
4	MEMBRANE VALVE
5	SYSTEM CUTTER
6	PROPORTIONAL DOSER (DOSATRON)
7	CHEMICAL SUCTION KIT
8	CHECK VALVE
9	VALVE
10	HANDLES
11	CHEMICAL HOSE WITH FILTER
A	WATER INLET (3/4" FEMALE THREAD)
B	WATER OUTLET (3/4" FEMALE THREAD)
C	PRESSURELESS WATER OUTLET
D	CHEMICAL INLET

BM6 38 10 00 3 ABM0 00

Water Disinfection Doser
Figure 301

R

B. Procedure

(1)Job Set-Up

(a)Position the access platform 1 m (3 ft.) and open the potable water service panel access door 136BR.

(b)Connect the electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).

(c)Make sure that the electronics racks ventilation is correct.

(d)Open the tank fill connection on the water service panel.

(e)Position a container below the access door.

(f)Connect the hose-vinyl to the drain connection on the potable water service panel and put it in the container below the access door.

(g)Connect the hose-vinyl to the waste-water drain masts.

(h)Position a container 50 l (13 US gal.) under each drain mast.

(j)Drain the potable water system (Ref. 12-24-38, P. Block 1).

(k)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2
800VU	WATER SYSTEM	1MA	H5
800VU	WATER SYSTEM	1MD	H6
800VU	WATER SYSTEM	1MP	H7

(2)Preparation of the Water Disinfectant Doser (Ref. Fig. 301)

(a)Before you start the disinfection procedure:

1 Do an analysis of the potable water that you will use to fill the potable water system

2 Make sure that the result of the analysis is within the limits for drinking water given by the local authority.

(b)Before you use the Water Disinfection Doser, make sure that it is correctly calibrated, clean and disinfected (refer to the manufacturer's instructions).

(c)Put the Water Disinfection Doser in position at the potable water sevice panel 136BR.

(d)Connect the water supply hose to the water inlet of the Water Disinfection Doser.

(e)Put the water outlet hose of the Water Disinfection Doser into a a container 30 l (8 US gal.).

(f)Put the small chemical hose with filter into the container with the disinfection solution.

(g)At the Water Disinfection Doser:

CAUTION : THE WATER PRESSURE MUST NOT BE MORE THAN 3.45 BARS (50.0 PSI). A WATER PRESSURE MORE THAN 3.45 BARS (50.0 PSI) CAN CAUSE DAMAGE.

1 Adjust the water pressure to between 3.0 bar (43.5 psi) and 3.45 bar (50.00 psi).

2 For a hydrogen peroxide solution with 50 percent Hydrogen Peroxide, adjust the proportional doser to a value of 0.09 percent.

3 Turn the inlet valve (membrane valve) slightly to open it, but do not fully open it at this time.

(h)Bleed the Water Disinfection Doser:

1 Press the bleed button on top of the doser unit to bleed the system.
2 Keep the bleed button pushed until only water (no air) comes from the bleed button.
3 Release the bleed button.

(j)Open the outlet valve of the Water Disinfection Doser.
(k)Slowly open the inlet valve (membrane valve) until it is fully open (the Water Disinfection Doser is self-priming).
(l)Operate the Water Disinfection Doser until the disinfectant starts to flow into the doser unit without air bubbles in the plastic tube.

NOTE : You can see the disinfectant flow through the plastic tube. A "clickclack" noise is typical for the DOSATRON unit when it is in operation.

(m)Operate the Water Disinfection Doser for 2-3 min. and let approximately 20 l (5.28 US gal.) of disinfection solution flow into the container 30 l (8 US gal.).
(n)Close the outlet valve of the Water Disinfection Doser.

(3)Disinfection of the potable water system

WARNING : MAKE SURE THAT THE EQUIPMENT YOU USE FOR THIS PROCEDURE IS CLEAN AND APPROVED FOR THE POTABLE WATER SYSTEM. IF NOT, IT CAN CAUSE CONTAMINATION OF THE POTABLE WATER SYSTEM.

(a)Make sure that all potable water shutoff valves are open.
(b)Make sure that the switch on each water heater is set to the OFF position.
(c)Put a warning notice in position to tell persons not to use the potable water system.
(d)Open the galley water filter housing. Remove the filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).
(e)Connect the outlet hose of the Water Disinfection Doser to the fill/drain port of potable water service panel.
(f)Fill the potable water system until the disinfection solution flows from the overflow port (Ref. 12-15-38, P. Block 1).
(g)Stop the Water Disinfection Doser.
(h)Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
(j)Bleed the potable water system:
1 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
2 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
3 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.38 US gal.) flow out.
4 Flush the toilets 15 times.
(k)Close the potable water shutoff valve in the lavatories and galleys.
(l)Depressurize the potable water system (Ref. 38-40-00, P. Block 301).
(m)Top up the potable water system:

1 Start the Water Disinfection Doser and fill the potable water system until the disinfection solution flows from the overflow port (Ref. 12-15-38, P. Block 1).

NOTE : This step replaces the solution lost through the water faucets.

(n)Leave the solution in the potable water system for 1 hour.
(p)Open the potable water shutoff valve in the lavatories and galleys.
(q)Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
(r)Flush the potable water system with the disinfection solution:
1 Start the procedure at the potable water equipment at the back of the aircraft and continue to the front.
2 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal) flow out.
3 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal) flow out.
4 In the galleys, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.
5 Flush the toilets 15 times.
(s)Leave the disinfectant in the potable water system for a further 0.5 hour.
(t)Disconnect the Water Service Disinfection Doser from the water service panel.
(u)Remove the safety clips and tags and close the circuit breakers that were opened in Para. 4.B.(1)(k).
(v)Drain the disinfection solution from the potable water system (Ref. 12-24-38, P. Block 1).

NOTE : For disposal of used disinfection solution, refer to national or local authority regulations.

(w)Flush the potable water system with clean water (without disinfectant):
1 Replenish the potable water system (Ref. 12-15-38, P. Block 1).
2 Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
3 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
4 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
5 In the galleys, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.
6 Flush the toilets 15 times.

(x)Do steps (v) and (w) a minimum of three times to make sure that there is no remaining disinfectant in the potable water system.
(y)Get a sample of the potable water for microbiological analysis.

NOTE : Recommended max. levels:
Refer to national or local authority regulations for valid

limits.

(z)If the number of colony forming units found are out of the limits given by local authorities, repeat steps (3)(e) thru (3)(z).

(4)Close-Up
(a)Open the galley water filter housing. Install the new filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).
(b)Remove the warning notices.
(c)Disconnect the hoses-vinyl from the waste-water drain masts.
(d)Remove all containers.
(e)Remove the hose-vinyl from the drain connection on the potable water service panel.
(f)Close the tank fill connection on the water service panel.
(g)Close potable water service panel access door 136BR and remove the access platform.
(h)Make sure that the switches on the water heaters in the lavatories (if installed) are set to the ON position.
(j)De-energize the aircraft electrical network and disconnect the electrical ground power unit (Ref. 24-41-00, P. Block 301).
(k)Make sure that the work area is clean and clear of tools and miscellaneous items of equipment.

7. Disinfection of the Water Tank and Distribution System with Elsil (Material No. 14-003K) using the Water Disinfection Doser

A. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform, 1 m (3 ft.)
(2)	Circuit Breaker Safety Clips and Tags
(3)	Warning Notices
(4)	Water Service Vehicle
(5)	Hose-Vinyl
(6)	Test Strip for hydrogen peroxide
(7)	Container 50 l (13 US gal.)
(8)	Container 30 l (8 US gal.)
(9)98F38108656000	Water Disinfection Doser
(10)Material No. 14-003 F	Disinfectants (Ref. 20-31-00)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 25-30-00, P. Block 301	Buffet and Galley
- 38-12-23, P. Block 201	Water Filter
- 38-40-00, P. Block 301	Air Supply

B. Procedure

(1)Job Set-Up

(a)Position the access platform 1 m (3 ft.) and open the potable water service panel access door 136BR.
(b)Connect the electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).
(c)Make sure that the electronics racks ventilation is correct.
(d)Open the tank fill connection on the water service panel.
(e)Position a container below the access door.
(f)Connect the hose-vinyl to the drain connection on the potable water service panel and put it in the container below the access door.
(g)Connect the hose-vinyl to the waste-water drain masts.
(h)Position a container 50 l (13 US gal.) under each drain mast.
(j)Drain the potable water system (Ref. 12-24-38, P. Block 1).

(2)Preparation of the Water Disinfectant Doser (Ref. Fig. 301)
(a)Before you start the disinfection procedure:
1 Do an analysis of the potable water that you will use to fill the potable water system
2 Make sure that the result of the analysis is within the limits for drinking water given by the local authority.
(b)Before you use the Water Disinfection Doser, make sure that it is correctly calibrated, clean and disinfected (refer to the manufacturer's instructions).
(c)Put the Water Disinfection Doser in position at the potable water service panel 136BR.
(d)Connect the water supply hose to the water inlet of the Water Disinfection Doser.
(e)Put the water outlet hose of the Water Disinfection Doser into a a container 30 l (8 US gal.).
(f)Put the small chemical hose with filter into the container with the disinfection solution.
(g)At the Water Disinfection Doser:

CAUTION : THE WATER PRESSURE MUST NOT BE MORE THAN 3.45 BARS (50.0 PSI). A WATER PRESSURE MORE THAN 3.45 BARS (50.0 PSI) CAN CAUSE DAMAGE.

1 Adjust the water pressure to between 3.0 bar (43.5 psi) and 3.45 bar (50.0 psi).
2 For a sodium hypochlorite solution with 13 percent free chlorine, adjust the proportional doser to a value of 0.07 percent.
3 Turn the inlet valve (membrane valve) slightly to open it, but do not fully open it at this time.
(h)Bleed the Water Disinfection Doser:
1 Press the bleed button on top of the doser unit to bleed the system.
2 Keep the bleed button pushed until only water and no air comes from the bleed button.
3 Release the bleed button.
(j)Open the outlet valve of the Water Disinfection Doser.
(k)Slowly open the inlet valve (membrane valve) until it is fully open (the Water Disinfection Doser is self-priming).
(l)Operate the Waster Disinfection Doser until the disinfectant starts to flow into the doser unit without air bubbles in the plastic tube.

NOTE : You can see the disinfectant flow through the plastic tube. A "clickclack" noise is typical for the DOSATRON unit when it is in operation.

(m)Operate the Water Disinfection Doser for 2-3 min. and let approximately 20 l (5.28 US gal.) of disinfection solution flow into the container 30 l (8 US gal.).
(n)Close the outlet valve of the Water Disinfection Doser.

(3)Disinfection of the potable water system

WARNING : MAKE SURE THAT THE EQUIPMENT YOU USE FOR THIS PROCEDURE IS CLEAN AND APPROVED FOR THE POTABLE WATER SYSTEM. IF NOT, IT CAN CAUSE CONTAMINATION OF THE POTABLE WATER SYSTEM.

(a)Make sure that all potable water shutoff valves are open.
(b)Make sure that the switch on each water heater is set to the OFF position.
(c)Put a warning notice in position to tell persons not to use the potable water system.

(d)Open the galley water filter housing. Remove the filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).
(e)Connect the outlet hose of the Water Disinfection Doser to the fill/drain port on the potable water service panel.
(f)Fill the potable water system until the disinfection solution flows from the overflow port (Ref. 12-15-38, P. Block 1).
(g)Stop the Water Disinfection Doser.
(h)Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
(j)Bleed the potable water system:
1 In each lavatory, flush the toilet 15 times.
2 In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal.) flow out.
3 In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal.) flow out.
4 In each galley, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal) flow out.
(k)Close the potable water shutoff valve in the lavatories and galleys.
(l)Depressurize the potable water system (Ref. 38-40-00, P. Block 301).
(m)Top up the potable water system:
1 Start the Water Disinfection Doser and fill the potable water system until the disinfection solution flows from the overflow port (Ref. 12-15-38, P. Block 1).

NOTE : This step replaces the solution lost through the water faucets.

(n)Leave the disinfection solution in the potable water system for 1 hour.
(p)Open the potable water shutoff valve in the lavatories and galleys.
(q)Repeat the steps (h) to (m).
(r)Leave the disinfection solution in the potable water system for

a further 0.5 hour.

(s)Open the potable water shutoff valve in the lavatories and galleys.

(t)Disconnect the Water Disinfection Doser and drain the disinfection solution from the potable water system (Ref. 12-24-38, P. Block 1).

NOTE : For disposal of used disinfection solution, refer to national or local authority regulations.

(u)Remove the safety clips and tags and close the circuit breakers that were opened in Para. 3.B.(1)(k).

(v)Flush the potable water system after disinfection:

1 Replenish the potable water system (Ref. 12-15-38, P. Block 1).

2 Pressurize the potable water system (Ref. 38-40-00, P. Block 301).

3 Operate the toilets and the water faucets in the lavatories and galleys to flush them:

a Operate each toilet and flush 15 times.

b In each lavatory, operate the cold water faucet and let approximately 3 l (0.8 US gal) flow out.

c In each lavatory, operate the hot water faucet and let approximately 3 l (0.8 US gal) flow out.

d In the galleys, operate the water faucets for the sinks, the coffee makers and the boilers and let approximately 5 l (1.3 US gal.) flow out.

(w)Get a sample of the potable water for microbiological analysis.

NOTE : Recommended max. levels:
Refer to national or local authority regulations for valid limits.

(x)If the number of colony forming units found are out of the limits given by local authorities, repeat steps (3)(e) thru (x).

(4)Test for any remaining disinfectant

(a)Use a test strip for hydrogen peroxide to test the potable water:

1 Let the water flow over the test strip from the water faucets in the galleys and lavatories.

NOTE : Obey the manufacturer's instructions when you use the test strip.

(b)If the test shows that there is remaining disinfectant in the water, flush the system again.

(5)Close-Up

(a)Open the galley water filter housing. Install the new filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).

(b)Remove the warning notices.

(c)Disconnect the hoses-vinyl from the waste-water drain masts.

(d)Remove all containers.

(e)Remove the hose-vinyl from the drain connection on the potable water service panel.

(f)Close the tank fill connection on the water service panel.

(g)Close the potable water service panel access door 136BR and remove the access platform.
(h)Make sure that the switches on the water heaters in the lavatories are set to the ON position.
(j)De-energize the aircraft electrical network and disconnect the electrical ground power unit (Ref. 24-41-00, P. Block 301).
(k)Make sure that the work area is clean and clear of tools and miscellaneous items of equipment.

R 9. Sampling of the Potable Water

WARNING : MAKE SURE THAT THE EQUIPMENT YOU USE FOR THIS PROCEDURE IS CLEAN AND APPROVED FOR THE POTABLE WATER SYSTEM. IF NOT IT CAN CAUSE CONTAMINATION OF THE POTABLE WATER SYSTEM.

Note : You must make sure that the source from which the potable water is filled (for the use of servicing the potable water system) has drinking water quality. Refer to the national authority regulations.

A. Reason for the Job

To measure the quality of the potable water.

B. Equipment and Materials

ITEM	DESIGNATION
(1)	Sterile glass sample bottles.
(2)	1 GLOVES - RUBBER
(3)	1 GUN - SPRAY
(4)Material No. 14-006	DISINFECTANT (SPRAY) (Ref. 20-31-00)
Referenced Procedures	
- 12-15-38, P. Block 1	Replenishing Potable Water
- 24-41-00, P. Block 301	AC External Power Control
- 38-40-00, P. Block 301	Air Supply

C. Procedure
(1)Job Set-up
(a)Connect the electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).
(b)Get access to the galleys and lavatories.
(c)Make sure that there is water in the potable water system, if necessary fill the system (Ref. 12-15-38, P. Block 1).

WARNING : MAKE SURE THAT THE EQUIPMENT YOU USE FOR THIS PROCEDURE IS CLEAN AND APPROVED FOR THE POTABLE WATER SYSTEM. IF NOT IT CAN CAUSE CONTAMINATION OF THE POTABLE WATER SYSTEM.

1 If you have to fill the potable water system:
a Take a sample of the water before you fill the system.

b Put a tag on the sterile glass sample bottle, write the location, the date and the time on the tag.

(d)Pressurize the potable water system (Ref. 38-40-00, P. Block 301).

(2)Get a Sample of the Potable Water

WARNING : MAKE SURE THAT YOU PUT ALL WATER SAMPLES IN SAMPLING CONTAINERS WHICH THE LABORATORY SUPPLIES. THESE SAMPLING CONTAINERS ARE SPECIALLY PREPARED TO DO MICROBIOLOGICAL TESTS. IF YOU DO NOT USE THE CORRECT CONTAINERS, THIS CAN CAUSE INCORRECT LABORATORY RESULTS. THUS IT WILL NOT BE POSSIBLE TO KNOW THE LEVEL OF CONTAMINATION IN THE POTABLE WATER SYSTEM.

NOTE : Only qualified persons are permitted to take samples. Use sterile GLOVES - RUBBER.

(a)Get samples from the water faucet at these locations:
- At a galley,
- At a lavatory.

NOTE : You must get the two samples at the farthest point from the potable-water tank.

(b) Apply disinfectant to the nozzle assemblies of the water faucet.

WARNING : OBEY THE MANUFACTURER'S INSTRUCTIONS WHEN YOU USE THIS/THESE MATERIAL/S.
USE PROTECTIVE CLOTHING, RUBBER BLOVES, GOGGLES AND A MASK.

1 Apply DISINECTANTS (Material No. 14-006) to the nozzle assemblies with a GUN - SPRAY and wait 3 minutes.

(c)Before you operate the faucet, put the sterile glass sample bottle in front of the water faucet.
(d)Carefully operate the water faucet for 3 min, then fill the sterile glass sample bottles with water.
(e)Seal the glass sample bottles and make sure that no contamination goes into the bottles.
(f)Put a tag on the glass sample bottles.
(g)Write down the aircraft registration, the system, the location, the date and the time on the tag.
(h)Send the water sample bottles to the hygienic institute for analysis.

(3)Water Quality Analysis

(a)General germ rate

1 The standards for drinking water given by the national authority are mandatory.

2 AIRBUS recommends the concentration of germs that follows:
Table 1

germs	max. allowed concentration
No. of germs increase at 22 deg.C (68 deg.F) for 44 hours	1000 / 1ml 1000 / 0.034 USfl.oz.
No. of germs increase at 36 deg.C (96.8 deg.F) for 44 hours	1000 / 1ml 1000 / 0.034 USfl.oz.

NOTE : Table 1 shows the standards for drinking water which are recommended by AIRBUS INDUSTRIE.

(b)Echerichia Coli and Coliform Bacteria
1 The standards for drinking water given by the national authority are mandatory.
2 AIRBUS recommends the concentration of the Echerichia Coli and Coliform Bacteria that follows:
- There must be no germ of the type Echerichia Coli or Coliform Bacteria in 1000ml (3.38 USfl.oz.).

(c)If the sample analysis shows values that are higher than the values given in step (1) and (2), do the disinfection of the potable water system.

(4)Close-up
(a)Make sure that the work area is clean and clear of tools and other items.
(b)De-energize the aircraft electrical network and disconnect the electrical ground power unit (Ref. 24-41-00, P. Block 301).

9. Sampling of the Potable Water

WARNING : DO NOT WORK ON THE TOILET WASTE SYSTEM AND THE POTABLE WATER SYSTEM AT THE SAME TIME. THIS WILL PREVENT CONTAMINATION OF THE POTABLE WATER SYSTEM. SUCH CONTAMINATION CAN BE DANGEROUS TO HEALTH.

WARNING : BEFORE YOU DO WORK ON THE POTABLE WATER SYSTE, CLEAN YOUR HANDS WITH SOAP AND WATER. THIS WILL PREVENT INFECTION. (CONTAMINATION FROM TOILET WASTE IS DANGEROUS TO HEALTH).

WARNING : MAKE SURE THAT THE EQUIPMENT YOU USE FOR THIS PROCEDURE IS CLEAN AND APPROVED FOR THE POTABLE WATER SYSTEM. IF NOT IT CAN CAUSE CONTAMINATION OF THE POTABLE WATER SYSTEM.

WARNING : BEFORE YOU FLUSH THE POTABLE WATER SYSTEM WITH HOT WATER, PUT ON PROTECTIVE CLOTHES, GOGGLES AND GLOVES. HOT WATER CAN BURN YOUR EYES AND SKIN. IF YOU GET HOT WATER IN YOUR EYES OR ON YOUR SKIN, GET IMMEDIATE MEDICAL AID.

NOTE : Before you do the flushing procedure, do an analysis of the water you will use. Make sure that the result is within the limits

which the national authority has specified for.

A. Reason for the Job
Self Explanatory

B. Equipment and Materials

ITEM	DESIGNATION
(1)	Access Platform, 1 m (3 ft.)
(2)	Circuit Breaker Safety Clips and Tags
(3)	Warning Notices
(4)	Containers - suitable for potable water
(5)	Water Heating Device
(6)	Hose-Vinyl
(7)	GLOVES - RUBBER

Referenced Procedures
- 12-15-38, P. Block 1 Replenishing Potable Water
- 12-16-38, P. Block 1 Replenishing Toilets
- 12-24-38, P. Block 1 Potable Water System - Draining
- 24-41-00, P. Block 301 AC External Power Control
- 25-30-00, P. Block 301 Buffet Gally
- 38-10-00, P. Block 301 Potable Water System - Draining
- 38-40-00, P. Block 301 Air Supply

C. Procedure

(1)Job Set-Up
(a)Position access platform 1 m (3 ft.) and open potable water service panel access door 136BR.
(b)Connect the electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).
(c)Make sure that the electronics racks ventilation is correct.
(d)Put the Warning Notice in position at the lavatories and the galleys to tell persons not ot use the potable water system.
(e)Open the tank fill connection on the water service panel.
(f)Position a container below the access door.
(g)Connect the hose-vinyl to the drain connection on the potable water service panel and put it in the container below the access door.
(h)Connect the hose-vinyl to the waste-water drain masts.
(j)Position a container 50 l (13 US gal.) under each drain mast.
(k)Drain the potable water system (Ref. 12-24-38, P. Block 1).
(k)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2
800VU	WATER SYSTEM	1MA	H5
800VU	WATER SYSTEM	1MD	H6
800VU	WATER SYSTEM	1MP	H7

(2)Preparation for Flushing with Hot Water
(a)Make sure that the water faucets in the lavatories and, if installed, in the wet galleys are in cold position.
(b)Make sure that the switches on all of the water heaters are set to OFF position.
(c)If installed, remove the galley water filter element in the wet galley (Ref. 25-30-00, P. Block 301).
1 Remove the caps and the filter elements from the galley filter housings. Do not install new filter elements at this time.
2 Install the caps on the galley filter housing and tighten the clamps.

R **ON A/C 101-200,

(3)Flushing of the Potable Water System (PWS) with Hot Water

WARNING : BEFORE YOU FLUSH THE POTABLE WATER SYSTEM WITH HOT WATER, PUT ON PROTECTIVE CLOTHES, GOGGLES AND GLOVES. HOT WATER CAN BURN YOUR EYES AND SKIN. IF YOU GET HOT WATER IN YOUR EYES OR ON YOUR SKIN, GET IMMEDIATE MEDICAL AID.

(a)Connect the water-heating device to the fill/drain nipple at the potable water service panel.
(b)Adjust the water-heating device until the filling water is at the correct temperature of 70.0 deg.C (158.00 deg.F) (Refer to the manual of the water-heating device).
(c)Fill the potable water system with 70.0 deg.C (158.00 deg.F) hot water at a pressure of (50.7631 psi) up to the overflow as described (Ref. 12-15-38,P. Block 1).

NOTE : The filling pressure during the filling process must not exceed 6.0 bar (87.0226 psi).

(d)Make sure that the potable water system is filled until water comes out of the overflow nipple. Let it flow for 10 seconds.
(e)Close the fill drain valve 381511 manually.
(f)Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
(g)Open the forward drain valve (6MP) manually until approximately 100 l water is discharged, then close the forward drain valve (6MP).

NOTE : The filling pressure during the filling process must not exceed 6.0 bar (87.0226 psi).

(h)Perform the flushing of the potable water system as described (Ref. 38-10-00, P. Block 301).

WARNING : BE CAREFUL WITH THE 70.0 DEG.C (158.00 DEG.F) HOT WATER, WHICH IS DISCHARGED. IT CAN CAUSE BURNS.

(j)Make sure that the shut off valves of all lavatories and galleys are

open after system flushing.
(k)If installed, operate the vent valves on the top of water filter housings of the lavatories and the galleys to remove the remaining air in the housings.
(l)For system flushing operate each faucet in all lavatories and galleys and flush each toilet. Do as follows:

NOTE : Start this procedure at the farthest aft potable water supplied equipment and continue to the forward equipment.

1 For a standard warm and cold water supply faucet:

NOTE : An activation of an infrared controlled water faucet for longer than 15 seconds deactivates the faucet. It can be reactivated by putting the hands again into the IR beam.

a Adjust the faucet to maximum hot water supply.
b Operate the faucet to let approximately 30.0 l (7.9250 US gal.) of water flow:
- Fill a container 1 l (1/4 US gal.) 30 times by appropriate operation of each faucet.
- The unwanted water from the container can be discarded into a washbasin.

c Adjust the faucet to cold water supply.
d Operate the faucet to let approximately 5.0 l (1.3208 US gal.) of water flow:
- Fill a container 1 l (1/4 US gal.) 5 times by appropriate operation of each faucet.
- The unwanted water from the container can be discarded into a washbasin.

2 For the toilets flush:
a Flush each toilets a minimum of 10 times.
(m)Depressurize the potable water system (Ref. 38-10-00, P. Block 301).
(n)Drain the potable water system (Ref. 12-24-38, P. Block 1).
(p)Make sure that the potable water system is comletely drained.
(q)Do the steps (c) to (n) three times.
(r)Make sure that the water which flows out of each faucet during the third flushing cycle will be examined for:
- Unusal smells
- Water clarity
- General contamination

(s)If the water quality is not satisfactory, do the steps (c) to (n) again until the water quality is satisfactory.
(t)Disconnect the water-heating device from the fill/drain nipple at the potable water service panel.

(4)Close-Up

R **ON A/C 001-100,

(3)Flushing of the Potable Water System (PWS) with Hot Water

WARNING : BEFORE YOU FLUSH THE POTABLE WATER SYSTEM WITH HOT WATER, PUT ON PROTECTIVE CLOTHES, GOGGLES AND GLOVES. HOT WATER CAN BURN YOUR EYES AND SKIN. IF YOU GET HOT WATER IN YOUR EYES OR ON YOUR SKIN, GET IMMEDIATE MEDICAL AID.

(a)Connect the water-heating device to the fill/drain nipple at the potable water service panel.
(b)Adjust the water-heating device until the filling water is at the correct temperature of 70.0 deg.C (158.00 deg.F) (Refer to manual of the water-heating device).
(c)Fill the potable water system with 70.0 deg.C (158.00 deg.F) hot water at a pressure of (50.7631 psi) up to the overflow as described (Ref. 12-51-38, P. Block 1).

NOTE : The filling pressure during the filling process must not exceed 6.0 bar (87.0226 psi).

(d)Make sure that the potable water system is filled until water comes out of the overflow nipple. Let it flow for 10 seconds.
(e)Close the fill drain valve 18MA manually.
(f)Pressurize the potable water system (Ref. 38-40-00, P. Block 301).
(g)Open the forward drain valve (6MP) manually until approximately 100 l water is discharged, then close the forward drain valve (6MP).

NOTE : The filling pressure during the filling process must not exceed 6.0 bar (87.0226 psi).

(h)Perform the flushing of the potable water system as described (Ref. 38-10-00, P. Block 301).

WARNING : BE CAREFUL WITH THE 70.0 DEG.C (158.00 DEG.F) HOT WATER, WHICH IS DISCHARGED. IT CAN CAUSE BURNS.

(j)Make sure that the shut off valves of all lavatories and galleys are open after system flushing.
(k)If installed, operate the vent valves on the top of water filter housings of the lavatories and the galleys to remove the remaining air in the housings.
(l)For system flushing operate each faucet in all lavatories and galleys and flush each toilet. Do as follows:

NOTE : Start this procedure at the farthest aft potable water supplied equipment and continue to the forward equipment.

1 For a standard warm and cold water supply faucet:

NOTE : An activation of an infrared controlled water faucet for longer than 15 seconds deactivates the faucet. It can be reactivated by putting the hands again into the IR beam.

a Adjust the faucet to maximum hot water supply.

b Operate the faucet to let approximately 30.0 l (7.9250 US gal.) of water flow:
- Fill a container 1 l (1/4 US gal.) 30 times by appropriate operation of each faucet.
- The unwanted water from the container can be discarded into a washbasin.

c Adjust the faucet to cold water supply.

d Operate the faucet to let approximately 5.0 l (1.3208 US gal.) of water flow:
- Fill a container 1 l (1/4 US gal.) 5 times by appropriate operation of each faucet.
- The unwanted water from the container can be discarded into a washbasin.

2 For the toilets:

a Flush each toilet a minimum of 10 times.

(m)Depressurize the potable water system (Ref. 38-10-00, P. Block 301).

(n)Drain the potable water system (Ref. 12-24-38, P. Block 1).

(p)Make sure that the potable water system is comletely drained.

(q)Do the steps (c) to (n) three times.

(r)Make sure that the water which flows out of each faucet during the third flushing cycle will be examined for:
- Unusal smells
- Water clarity
- General contamination

(s)If the water quality is not satisfactory, do the steps (c) to (n) again until the water quality is satisfactory.

(t)Disconnect the water-heating device from the fill/drain nipple at the potable water service panel.

(4)Close-Up

R **ON A/C ALL

(a)Do the sterilization of the potable water system (Ref. 38-10-00, P. Block 301).

(b)Do the servicing of the toilet system (Ref. 12-16-38, P. Block 1).

(c)Do a sampling of the potable water system (Ref. 38-10-00, P. Block 301).

(d)Remove all containers.

(e)Open the galley water filter housing. Install the new filter cartridge and close the filter housing (Ref. 25-30-00, P. Block 301).

(f)Remove the warning notices.

(g)Disconnect the hose-vinyl from the waste-water drain masts.

(h)Remove the hose-vinyl from the drain connection on the potable water service panel.

(j)Close the tank fill connection on the water service panel.

(k)Close the potable water service panel access door 136BR and remove the access platform.

(l)Make sure that switches on the water heaters in the lavatories (if installed) are set to the ON position.

(m)De-energize the aircraft electrical network and disconnect the

electrical ground power unit (Ref. 24-41-00, P. Block 301).

(n)Make sure that the work area is clean and clear of tools and miscellaneous items of equipment.

R **ON A/C 101-200,

1. General
Water is stored in three tanks, each having a capacity of 200 l (52 US gal.). They are filled through the fill/drain port at potable water service panel via fill/overflow and drain valve. For distribution, the tanks are pressurized by the air supply system.

R **ON A/C 001-100,

1. General
Water is stored in three tanks, each having a capacity of 200 l (52 US gal.). They are filled through the fill/drain port at potable water service panel via fill/overflow and drain valve. Water quantity to be stored can be selected using the preselection system which is installed. For distribution, the tanks are pressurized by the air supply system.

R **ON A/C ALL

2. Component Location

R **ON A/C 001-100,

(Ref. Fig. 001)

R **ON A/C 101-200,

R (Ref. Fig. 002)

R **ON A/C ALL

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
R **ON A/C 101-200,					
381511	VALVE-FILL/OVERFLOW AND DRAIN		136		38-15-00
381541	TANK-WATER		138		38-11-11
381542	TANK-WATER		138		38-11-11
381545	TANK-WATER		138		38-11-11
1	PANEL-POTABLE-WATER-SERVICE		136	136BR	
2	HANDLE-FILL/OVERFLOW AND DRAIN VALVE CONTROL		136	136BR	38-00-00
3	PORT-FILL/DRAIN		136	136BR	
4	PORT-OVERFLOW		136	136BR	

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
R **ON A/C 001-100,					
7MA	TRANSMITTER-WATER QUANTITY		138		38-13-11
10MA	SWITCH-LIMIT	910VU	136	136BR	38-42-13
15MA	UNIT-PRESELECTION CONTROL		138		38-13-14
16MA	SWITCH-PRESELECTION	863VU	221		38-13-14
17MA	LIGHT-TANK FULL INDICATION	910VU	136	136BR	
18MA	VALVE-FILL/OVERFLOW AND DRAIN		136		38-15-00
381541	TANK-WATER		138		38-11-11
381542	TANK-WATER		138		38-11-11
381545	TANK-WATER		138		38-11-11
1	PANEL-POTABLE WATER SERVICE		136	136BR	
2	HANDLE-FILL/OVERFLOW AND DRAIN VALVE CONTROL		136	136BR	38-00-00
3	POTABLE WATER FILL/DRAIN PORT WITH CAP		136	136BR	
4	PORT-OVERFLOW		136	136BR	
R **ON A/C ALL					

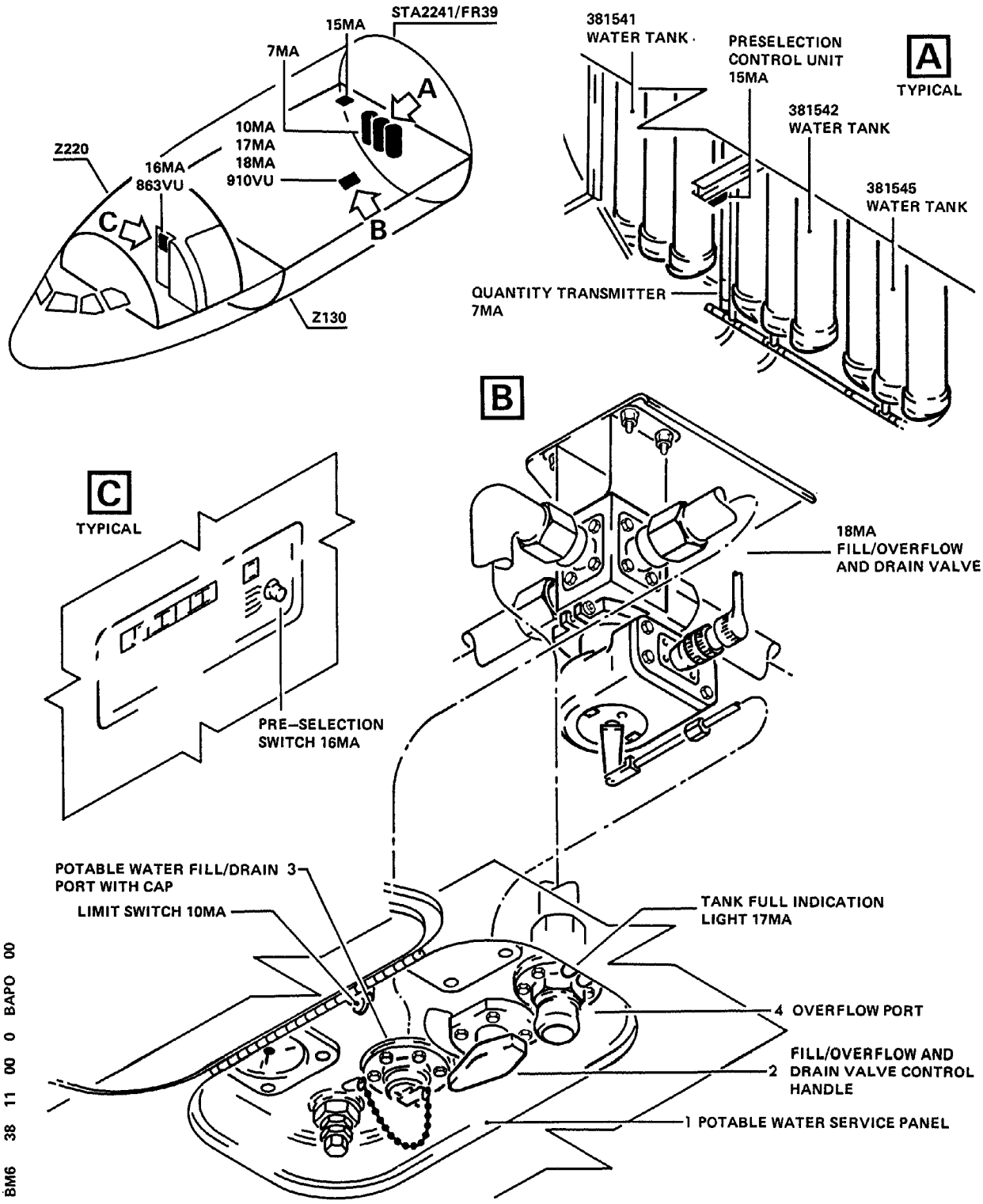
3. Description

A. Water Tanks (381541, 381542, 381545)
The water tanks are installed in the pressurized zone of the RH fuselage at (FR39) between the FWD cargo compartment and wing box. They are constructed of GRP (Glassfiber Reinforced Plastic) material and equipped with mounting provisions for quantity transmitter (7MA) and plate assemblies on which fill/drain, distribution and pressurization plumbing with their associated controls can be installed.

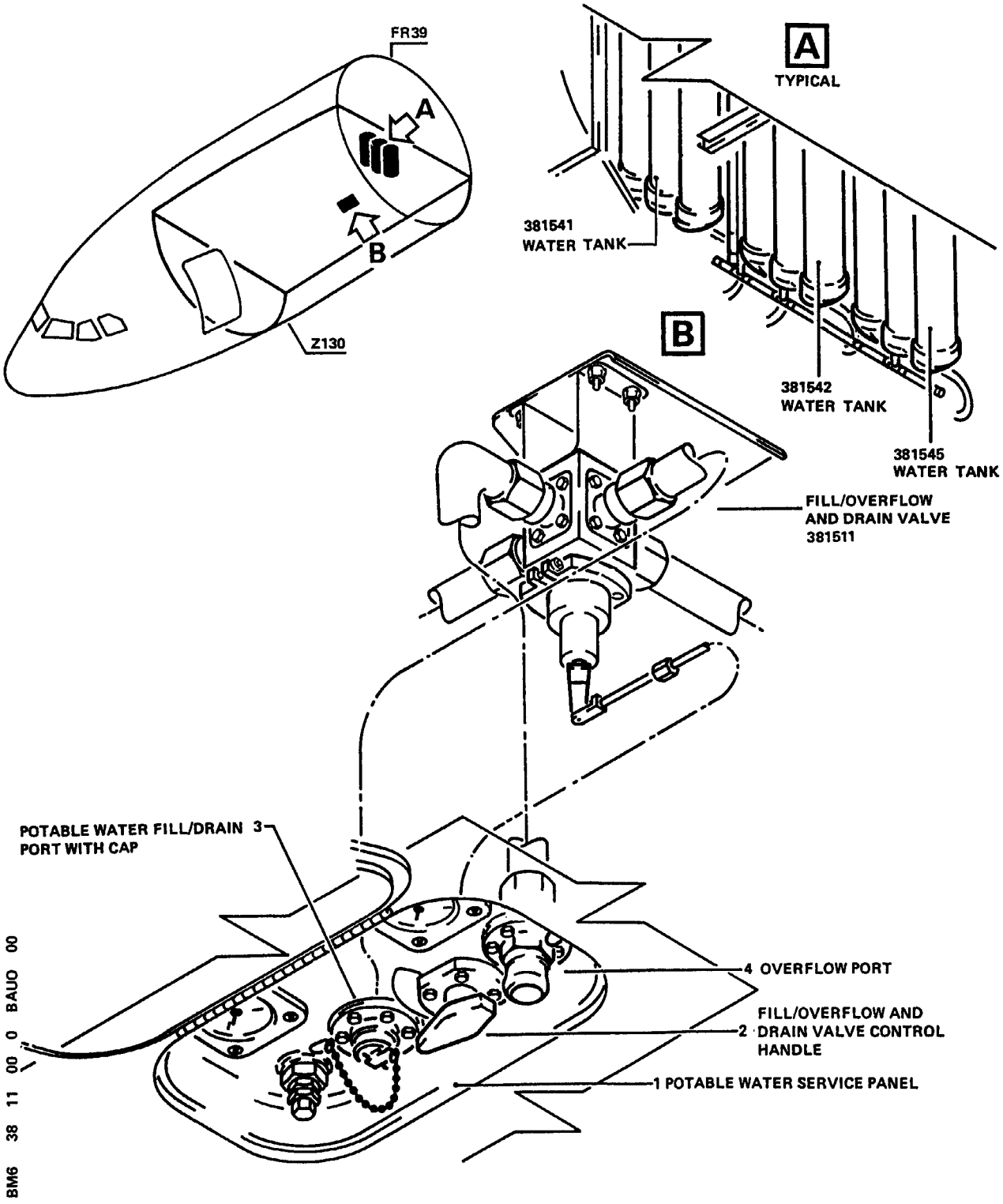
R **ON A/C 101-200,

B. Fill/Overflow and Drain Valve (381511)
It is a 4-way valve installed in between the tank fill and overflow lines. It is manually operated.

C. Potable Water Service Panel
The potable water service panel is located on the outer skin RH lower fuselage between (FR38.1) and (FR38.2) and is equipped with the following filling facilities:
- Potable water fill/drain port
- Fill/overflow and drain valve control handle
- Potable water overflow port.



Component Location
Figure 001



Component Location
Figure 002

R

4. Operation
The water storage system is filled via fill/overflow and drain valve. For filling, the fill/overflow and drain valve control handle is turned from NORMAL to FILL position and then pulled.In FILL position the fill/drain port is connected to the tank fill line and the tank overflow line is connected to the overflow port. Escaping water at overflow port indicates full storage system.

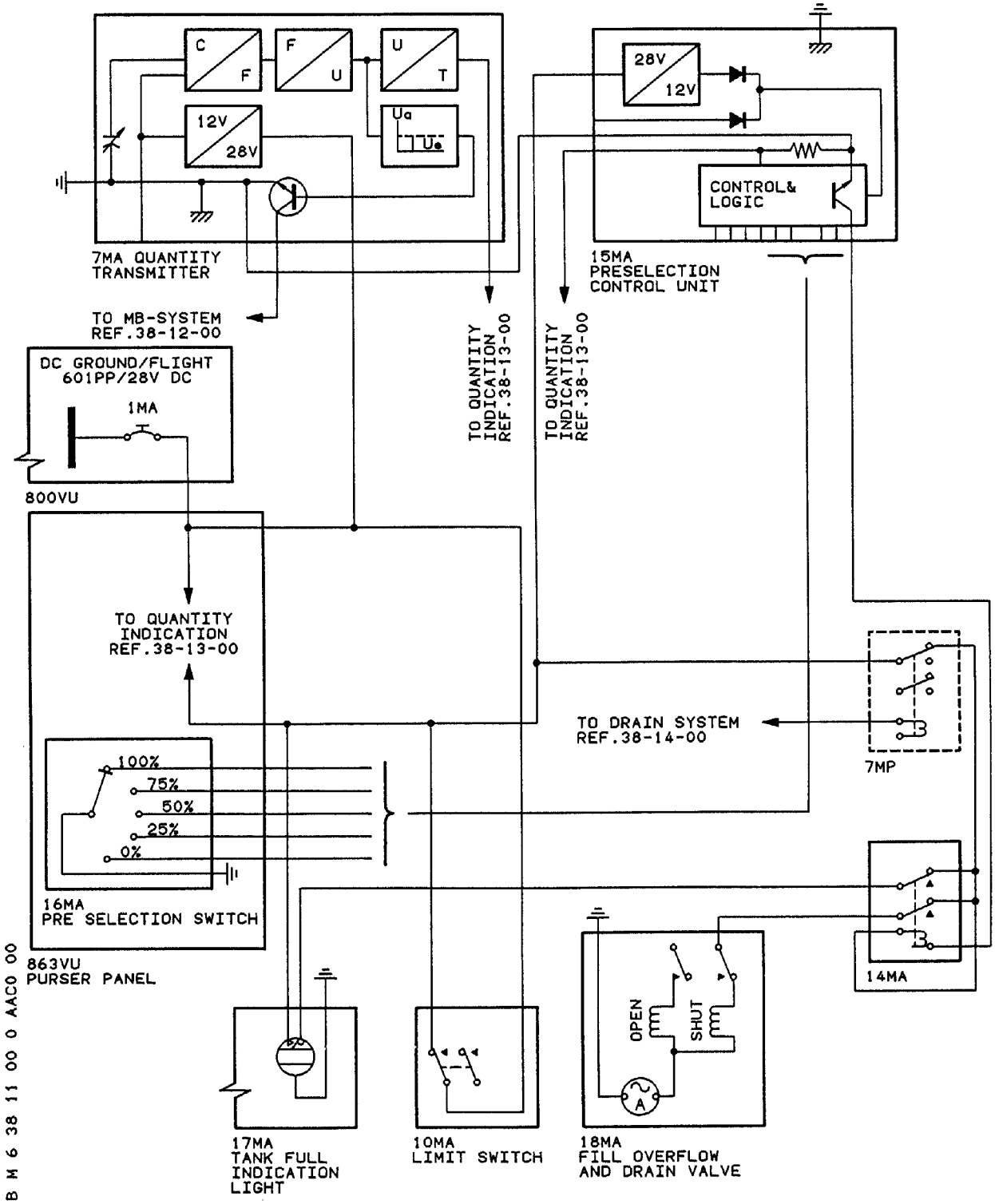
R **ON A/C 001-100,

B. Potable Water Service Panel
The potable water service panel is located on the outer skin RH lower fuselage between (FR38.1) and (FR38.2), and is equipped with the following filling facilities:
- Door microswitch (10MA)
- Indicator light TANK FULL (17MA)
- Potable water fill/drain port
- Fill/overflow and drain valve control handle
- Potable water overflow port

C. Preselection System
(Ref. Fig. 003)
The preselection system controls the amount of water to be stored.
It consists of:
- Preselection Switch (16MA)
  The preselection switch is installed on the purser's panel (863VU) and allows the required water quantity to be set in percent. It is connected to the preselection control unit (15MA).
- Preselection Control Unit (15MA)
  The preselection control unit is installed on the longitudinal crossbeam between (FR38.1) and (FR38.2).
  Electrical power is supplied to the preselection control unit (15MA) via circuit breaker (1MA) on circuit breaker panel (800VU) and limit switch (10MA) on the potable water service panel.

In addition, it is also connected to quantity transmitter (7MA) and to relay (14MA), which controls indicator light TANK FULL (17MA) and fill/overflow and drain valve (18MA).
- TANK FULL indicator light (17MA)
  It is installed on potable water service panel and indicates that preselected water quantity is reached.
- Fill/Overflow and drain valve (18MA)
  It is a 4-way valve installed in between the tank fill and overflow lines. For filling, the valve is manually opened and electrically closed.

4. Operation
The quantity of water to be stored is selected by preselection switch (16MA). For filling, the fill/overflow and drain valve control handle is turned from NORMAL to FILL position and then pulled. This opens the fill/drain and overflow ports.



Electrical Schematic
Figure 003

While filling, the quantity transmitter (7MA) sends an electrical signal to the preselection control unit (15MA) which compares this with the electrical signal transmitted by the preselection switch (16MA).
When the electrical signals are of equal value, the preselection control unit (15MA) activates relay (14MA), which causes the TANK FULL indication light (17MA) to come on and the fill/overflow and drain valve (18MA) to close electrically which then returns the control handle to NORMAL position.

WATER TANK - REMOVAL/INSTALLATION

CAUTION : THE WATER QUANTITY TRANSMITTER IS FRAGILE. DO NOT PUSH OR BEND.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, up to 2.30 m (7.50 ft.)
B.	Blanking Caps
C.	Circuit Breaker Safety Clips and Tags
D.	Corrosion-Resistant Steel Lockwire, 0.8 mm (0.03 in.) dia.
E.	Water Quantity Flow Meter
F.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
G.	Packing
H. Material No. 05-022	Special Materials (Ref. 20-31-00)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 25-54-10, P. Block 201	FWD Cargo Compartment Linings
- 38-10-00, P. Block 301	Potable Water System
- 38-40-00, P. Block 301	Air Supply
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
- 53-10-55, P. Block 401	FWD Cargo Compartment Fixed Partition

2. Procedure

A. Job Set-Up
(1)Drain potable water system (Ref. 12-24-38, P. Block 1).
(2)Position access platform under FWD cargo compartment door (Z811).
(3)Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-00, P. Block 301).
(4)Remove FWD cargo compartment fixed partitions (131RW) and (132SW) (Ref. 53-10-55, P. Block 401).
NOTE : For better access, remove access panel (136AR) and ceiling panel (132GC), if necessary (Ref. 25-54-10, P. Block 201).
(5)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2
800VU	WATER SYSTEM	1MA	H5
800VU	WATER SYSTEM	1MD	H6
800VU	WATER SYSTEM	1MP	H7

B. Removal

R **ON A/C 001-100,

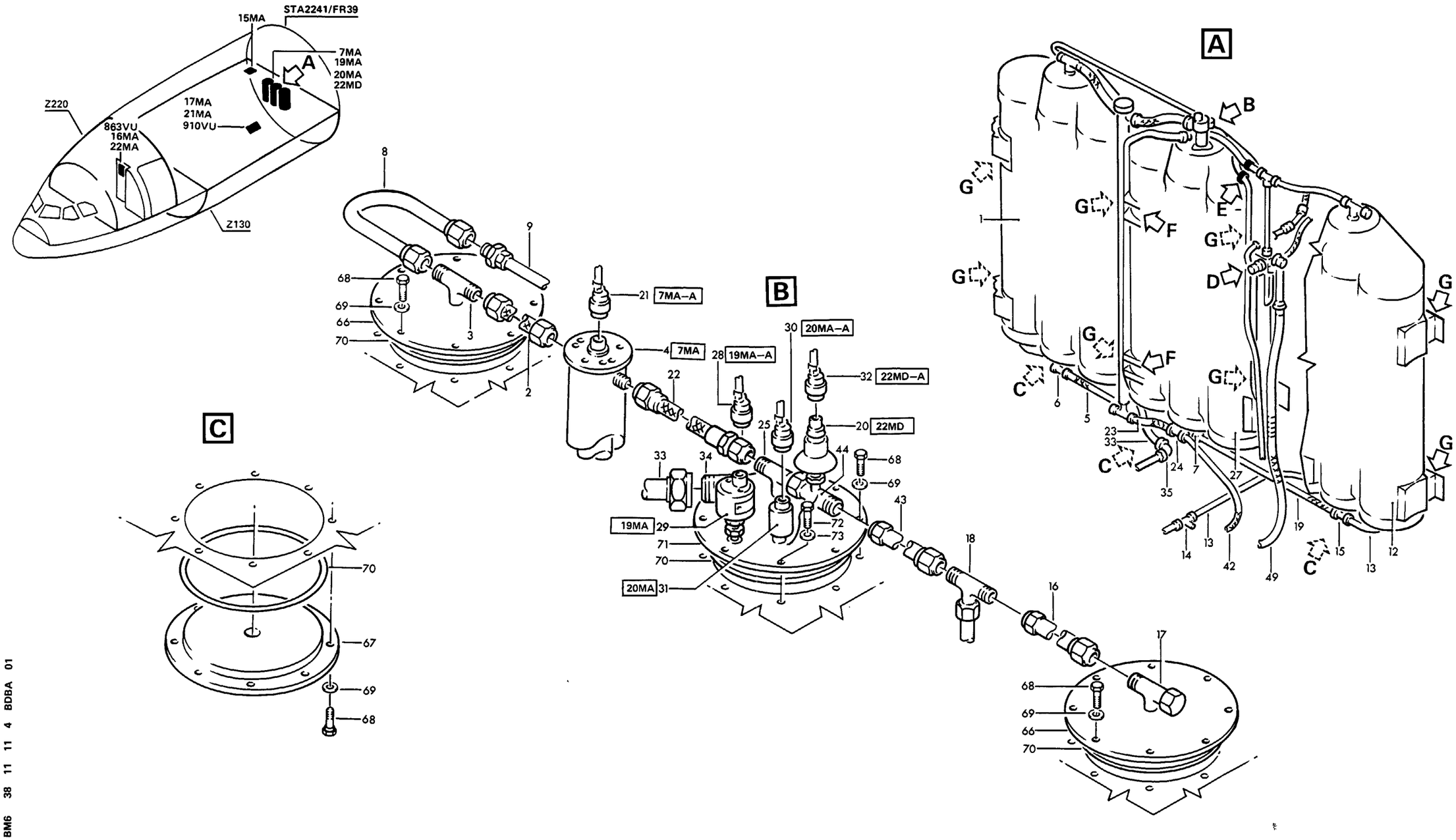
(Ref. Fig. 401)

R **ON A/C 101-200,

R (Ref. Fig. 402)

R **ON A/C ALL

(1)Remove RH water tank (1) as follows:
(a)Disconnect and remove hose (2) from T-fitting (3) and water quantity transmitter 7MA (4).
(b)Disconnect and remove hose (5) from T-fittings (6, 7).
(c)Disconnect and remove tube (8) from T-fitting (3) and tube (9).
(d)Remove bolts (10), washers (11) and remove tank (1).
(e)Fit blanking caps to T-fittings, hoses, tubes and to water quantity transmitter.
(2)Remove LH water tank (12) as follows:
(a)Disconnect and remove tube (16) from T-fittings (17, 18).
(b)Disconnect and remove tube (13) from T-fittings (14, 15).
(c)Disconnect and remove hose (19) from T-Fittings (7, 15).
(d)Remove bolts (10), washers (11) and remove tank (12).
(e)Fit blanking caps to T-fittings, tubes and hose.
CAUTION : THE WATER QUANTITY TRANSMITTER IS FRAGILE. DO NOT PUSH OR BEND.
(3)Remove water quantity transmitter 7MA (4) as follows:
(a)Disconnect and cap electrical plug (21) of water quantity transmitter 7MA (4).
(b)Disconnect and remove hoses (22, 23) from T-fittings (24, 25) and water quantity transmitter 7MA (4).
(c)Remove water quantity transmitter 7MA (4) by removing clamps (26).
(d)Fit blanking caps to all openings at water quantity transmitter, hoses and T-fittings.
(4)Remove MID water tank (27) as follows:
(a)Disconnect and cap electrical plug (28) from pressure switch 19MA (29), electrical plug (30) from pressure transmitter 20MA (31) and electrical plug (32) from pressure switch 22MD (20).
(b)Disconnect unions of tube (33) at elbow-fittings (34, 35).
(c)Remove tube (33) by removing clamps (36).
(d)Remove nut (37), washer (38) and bolt (39).
(e)Remove clamps (40, 41).
(f)Disconnect hose (42) from T-fitting (24).
(g)Disconnect and remove tube (43) from T-fittings (18, 44).
(h)Disconnect hose (45) from filter (46).
(j)Disconnect tube (9) from check valve (47).
(k)Remove bolt (48), washer (49) and nut (50).
(l)Remove tube (9) by removing clamp (51).
(m)Remove bolts (52), washers (53) and bracket assembly (54).
NOTE : Retain bracket assembly for reinstallation.



BM6 38 11 11 4 BDBA 01

Water Tank (sheet 1/2)
Figure 401

R EFFECTIVITY: 001-100,

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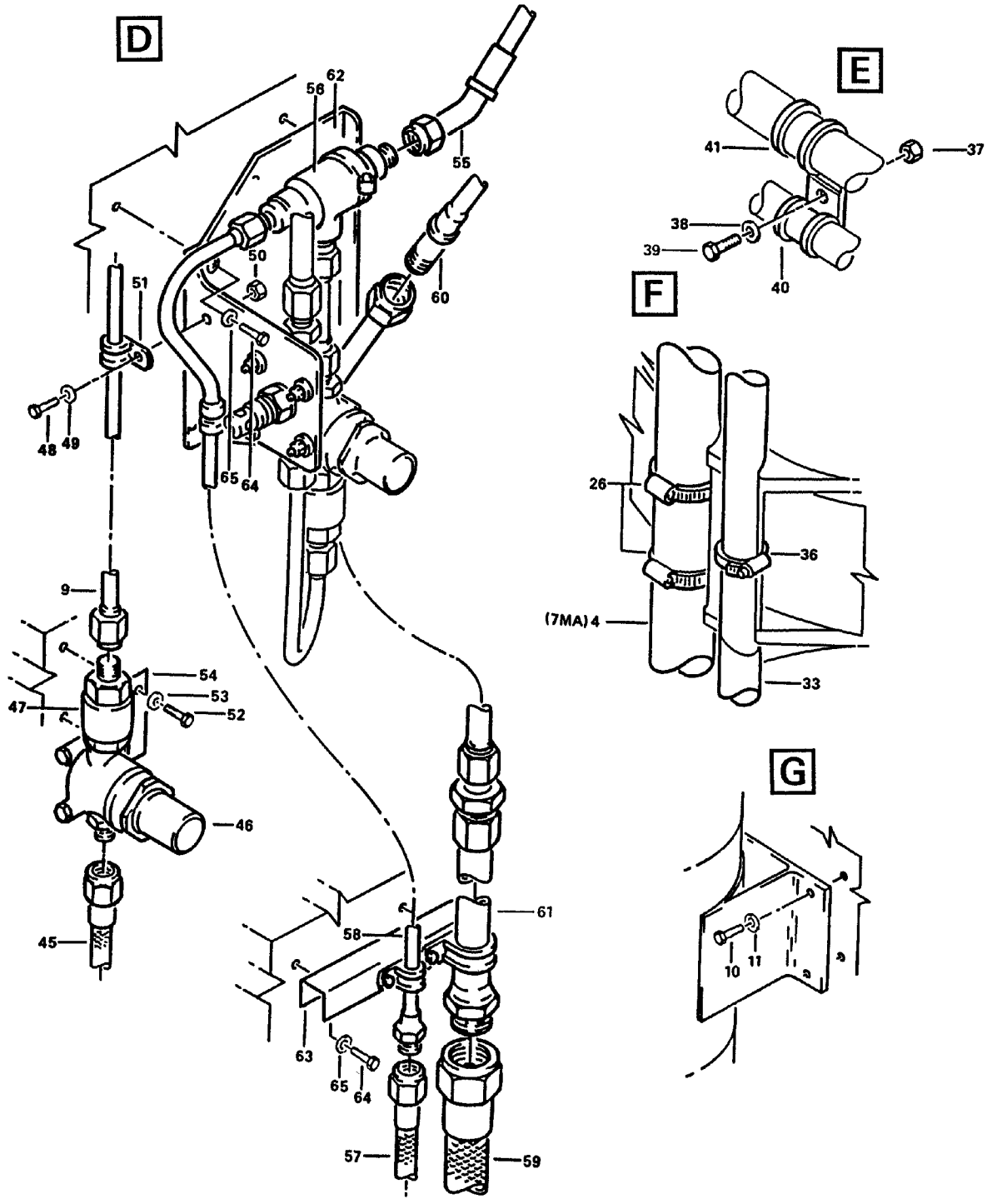

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Water Tank (sheet 2/2)
Figure 401

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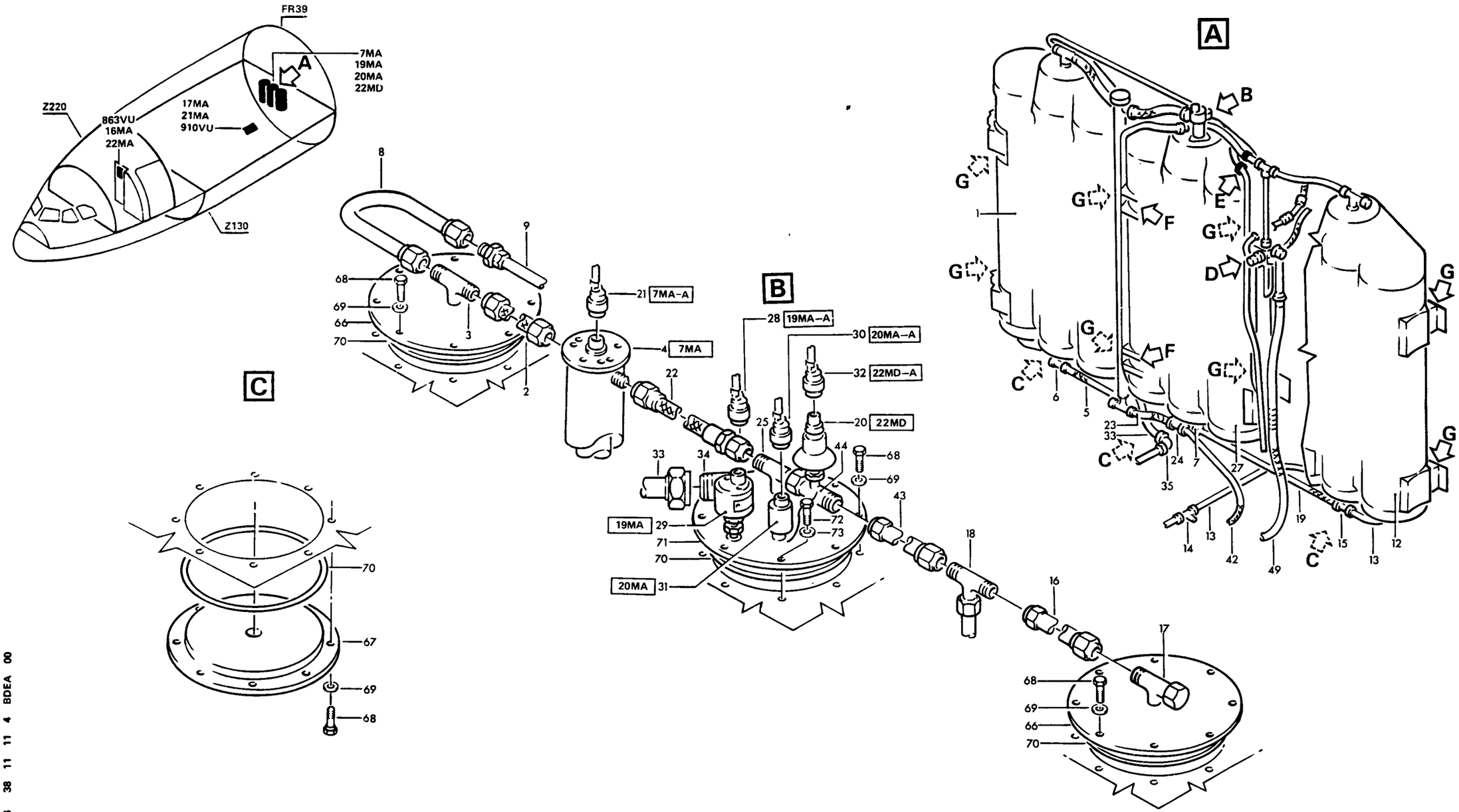

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Water Tank (sheet 1/2)
Figure 402

R

R | EFFECTIVITY: 101-200,

PIA

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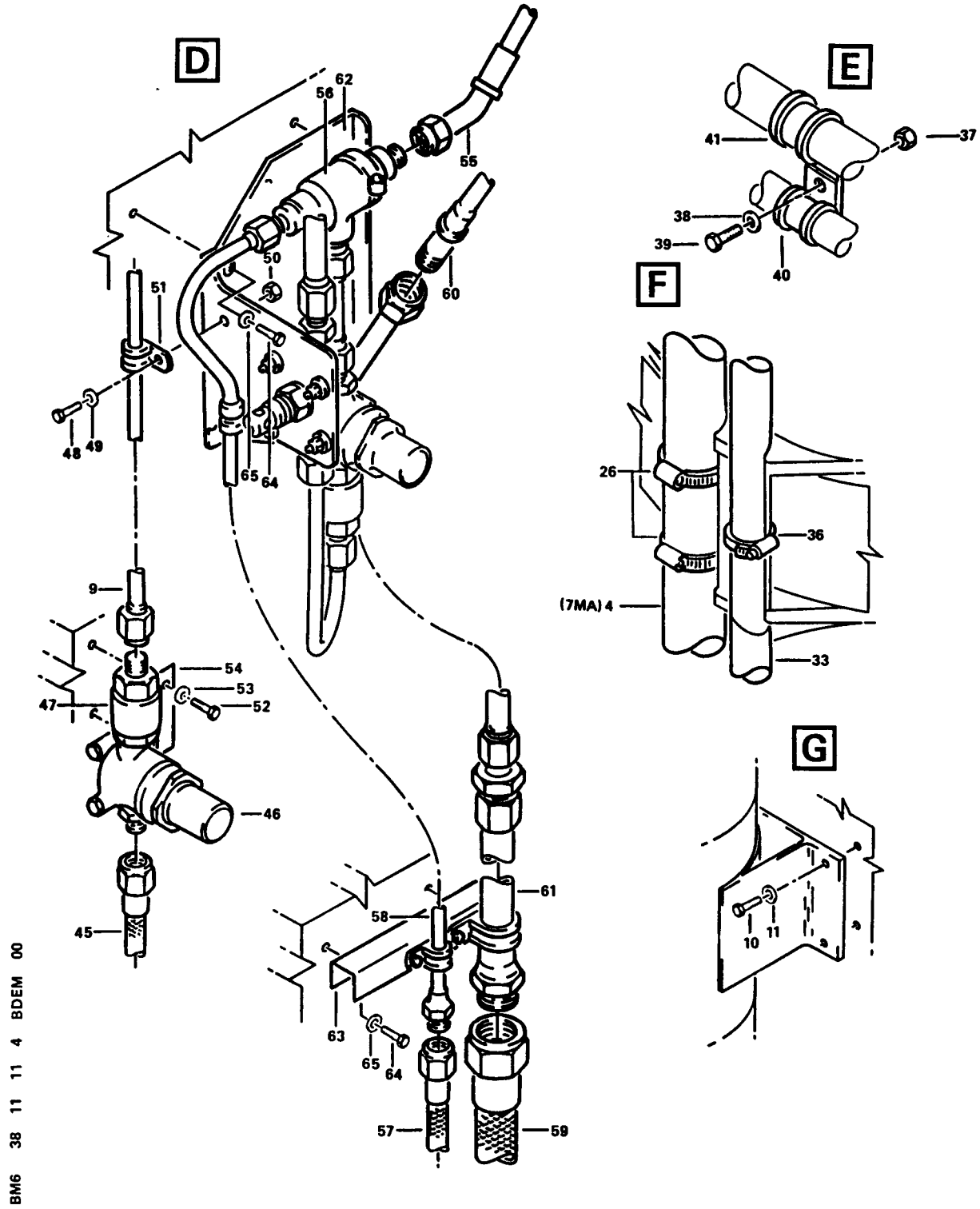


Water Tank (sheet 2/2)
Figure 402

(n)Disconnect hose (55) from shuttle valve (56).
(o)Disconnect hose (57) from tube (58).
(p)Disconnect hoses (59, 60) from tube (61).
(q)Remove mounting plate (62) and bracket (63) with attached tubing by removing bolts (64) and washers (65).
(r)Remove bolts (10), washers (11) and remove tank (27).
(s)Fit blanking caps to tubes, hoses, elbow-fittings, T-fittings, filter, check valve and shuttle valve.

C. Preparation of Replacement Component

R **ON A/C 001-100,

(Ref. Fig. 401)

R **ON A/C 101-200,

R (Ref. Fig. 402)

R **ON A/C ALL

(1)Prepare RH water tank (1) as follows:
(a)Remove covers (66, 67) from removed tank (1) by removing bolts (68) and washers (69).
NOTE : Retain covers for reinstallation.
(b)Remove and discard packing (70).
(c)Remove shipping caps from replacement tank (1) and install caps to removed tank (1).
(d)Install new packing (70) to replacement tank (1).
(e)Position covers (66, 67) on replacement tank (1) and secure with washers (69) and bolts (68).
(2)Prepare LH water tank (12) as follows:
(a)Remove covers (66, 67) from removed tank (12) by removing bolts (68) and washers (69).
NOTE : Retain covers for reinstallation.
(b)Remove and discard packing (70).
(c)Remove shipping caps from replacement tank (12) and install caps to removed tank (12).
(d)Install new packing (70) to replacement tank (12).
(e)Position covers (66, 67) on replacement tank (12) and secure with washers (69) and bolts (68).
(3)Prepare MID water tank (27) as follows:
(a)Remove cover (67) from removed tank (27) by removing bolts (68) and washers (69).
NOTE : Retain cover for reinstallation.
(b)Remove lockwire from pressure transmitter 20MA (31) and bolt (72).
(c)Remove bolt (72) and washer (73).
(d)Remove cover (71) by removing bolts (68) and washers (69).
NOTE : Retain cover for reinstallation.
(e)Remove and discard packing (70).

(f)Remove shipping caps from replacement tank (27) and install caps on removed tank (27).
(g)Install new packing (70) on replacement tank (27).
(h)Position covers (67, 71) on replacement tank (27) and secure with washers (69) and bolts (68).
(j)Install bolt (72) with washer (73) on cover (71).
(k)Secure pressure transmitter 20MA (31) with lockwire 0.8 mm (0.03 in.) dia. to bolt (72).

D. Preparation for Installation

R **ON A/C 001-100,

(Ref. Fig. 401)

R **ON A/C 101-200,

R (Ref. Fig. 402)

R **ON A/C ALL

(1)Prepare RH water tank (1) as follows:
(a)Remove blanking caps and wrap sealing tape (Mat. No. 05-022) around thread of fittings.
(2)Prepare LH water tank (12) as follows:
(a)Remove blanking caps and wrap sealing tape (Mat. No. 05-022) around thread of fittings.
(3)Prepare MID water tank (27) as follows:
(a)Remove blanking caps and wrap sealing tape (Mat. No. 05-022) around thread of fittings.
CAUTION : THE WATER QUANTITY TRANSMITTER IS FRAGILE. DO NOT PUSH OR BEND.
(4)Prepare water quantity transmitter 7MA (4) as follows:
(a)Remove blanking caps and wrap sealing tape (Mat. No. 05-022) around thread of fittings.
(5)Prepare installation area as follows:
(a)Remove all blanking caps and plugs from tubes, hoses, T-fittings, elbow-fittings, filter, check valve and shuttle valve.

E. Installation

R **ON A/C 001-100,

(Ref. Fig. 401)

R **ON A/C 101-200,

R (Ref. Fig. 402)

R **ON A/C ALL

(1)Install MID water tank (27) as follows:

(a)Position tank (27) on brackets and secure with bolts (10) and washers (11).
(b)Position mounting plate (62) and bracket (63) with attached tubing on tank (27) and secure with bolts (64) and washers (65).
(c)Connect hose (55) to shuttle valve (56).
(d)Connect hose (57) to tube (58).
(e)Connect hoses (59, 60) to tube (61).
(f)Position tube (33) and connect unions to elbow-fittings (34, 35).
(g)Secure tube (33) by installing clamps (36).
(h)Connect hose (42) to T-fitting (24).
(j)Install bracket assembly (54) and secure with bolts (52) and washers (53).
(k)Position tube (9) with clamp (51) and secure with bolt (48), washer (49) and nut (50).
(l)Connect tube (9) to check valve and hose (45) to filter (46).
(m)Position and connect tube (43) to T-fittings (18, 44).
(n)Install clamps (40, 41) and secure with bolt (39), washer (38) and nut (37).
(p)Remove caps and connect electrical plug (28) to pressure switch 19MA (29), electrical plug (30) to pressure transmitter 20MA (31) and electrical plug (32) to pressure switch 22MD (20).

CAUTION : THE WATER QUANTITY TRANSMITTER IS FRAGILE. DO NOT PUSH OR BEND.

(2)Install water quantity transmitter 7MA (4) as follows:
(a)Position water quantity transmitter 7MA (4) and secure with clamps (26).
(b)Position and connect hoses (22, 23) to T-fittings (24, 25) and water quantity transmitter 7MA (4).
(c)Remove cap and connect electrical plug (21) to water quantity transmitter 7MA (4).
(3)Install LH water tank (12) as follows:
(a)Position tank (12) on brackets and secure with bolts (10) and washers (11).
(b)Position and connect tube (16) to T-fittings (17, 18).
(c)Position and connect hose (19) to T-fittings (7, 15).
(d)Position and connect tube (13) to T-fittings (14, 15).
(4)Install RH water Tank (1) as follows:
(a)Position tank (1) on brackets and secure with bolts (10) and washers (11).
(b)Position and connect hose (2) to T-fitting (3) and water quantity transmitter 7MA (4).
(c)Position and connect hose (5) to T-fittings (6, 7).
(d)Position and connect tube (8) to T-fitting (3) and to tube (9).

F. Test

NOTE : It is recommended that disinfection procedure (Ref. 38-10-00, P. Block 301) and the following test procedure be accomplished simultaneously.

(1)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(2)Make certain that electronics racks ventilation is correct.
(3)Remove safety clips and tags and close circuit breakers 1MA, 1MD and 1MP.

(4)Open potable water service panel access door (136BR).
(5)Perform test.

ACTION	RESULT
R **ON A/C 101-200,	
1. On potable water service panel: - replenish potable water system (Ref. 12-15-38, P. Block 1) using external water quantity flow meter in filling line to verify actual quantity of water. NOTE : Deviation of + 10 l per 100 l is allowed. - check water tanks and connected lines for leakage. NOTE : Leakage is not permissible.	On potable water service panel: - quantity gage (4MA) indicates actual water quantity. On purser's panel (863VU): - combi gage (22MA) indicates actual water quantity.
2. Pressurize potable water system (Ref. 38-40-00, P. Block 301). - check water tanks and connected lines for water and/or air leaks. NOTE : Leakage is not permissible.	On purser's panel (836VU): - combi gage (22MA) indicates a pressure of approx. 25 psi (1.72 bar). On potable water service panel - pressure gage (21MA) indicates a pressure of approx. 25 psi (1.72 bar).
R **ON A/C 001-100,	
1. On purser's panel (863VU): - place preselection switch (16MA) to 25 % position.	
2. On potable water service panel: - replenish potable water system (Ref. 12-15-38, P. Block 1) using external water quantity flow meter in filling line to verify actual quantity of water. NOTE : Deviation of + 10 l per 100 l is allowed. - check water tanks and connected lines for leakage. NOTE : Leakage is not permissible.	On purser's panel (863VU): - combi gage (22MA) indicates selected water quantity. On potable water service panel: - the fill/overflow and drain valve (18MA) closes automatically and TANK FULL indication light (17MA) comes on, when selected water quantity is reached.
3. Repeat step 1. and 2. with preselection switch (16MA) in position 50 %, 75 % and 100 %.	- for results, see step 2.

ACTION	RESULT
4. Pressurize potable water system (Ref. 38-40-00, P. Block 301).	On purser's panel (836VU): - combi gage (22MA) indicates a pressure of approx. 25 psi (1.72 bar). On potable water service panel - pressure gage (21MA) indicates a pressure of approx. 25 psi (1.72 bar).
- check water tanks and connected lines for water and/or air leaks. NOTE : Leakage is not permissible.	

R **ON A/C ALL

(6)Remove external water quantity flow meter.
(7)Drain potable water system (Ref. 12-24-38, P. Block 1), if necessary.
(8)De-energize the aircraft electrical network and disconnect electrical power unit (Ref. 24-41-00, P. Block 301).
(9)Close potable water service panel access door (136BR).

G. Close-Up
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Install FWD cargo compartment fixed partitions (131RW) and (132SW) (Ref. 53-10-55, P. Block 401).
NOTE : Install access panel (136AR) and ceiling panel (132GC), if removed (Ref. 25-54-10, P. Block 201).
(3)Remove safety lock (Ref. 52-30-00, P. Block 301) and close FWD cargo compartment door (Z811).
(4)Remove access platform.
(5)If required, disinfect (Ref. 38-10-00, P. Block 301) and replenish potable water system (Ref. 12-15-38, P. Block 1).
(6)Remove safety clip and tag and close circuit breaker 19MD.

DISTRIBUTION - DESCRIPTION AND OPERATION

1. General

The water distribution consists of a system of pipes. The pipes are routed underneath the cabin floor from the water storage system to the respective water faucets in lavatories, galleys and to the toilet bowl flushing system.

2. Component Location

(Ref. Fig. 001)

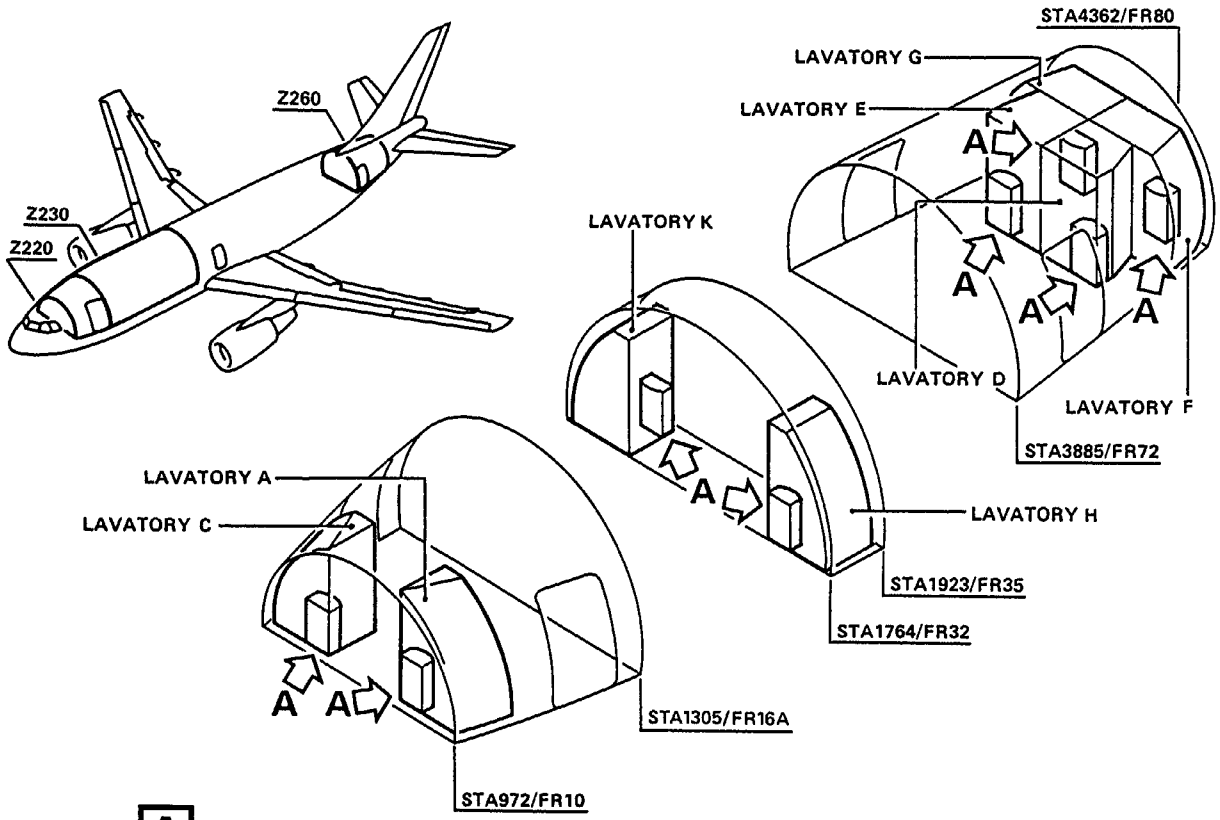
FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
7MA	TRANSMITTER-WATER QUANTITY		138		38-13-11
19MA	SWITCH-PRESSURE		138		38-41-17
3MB	HEATER-WATER, LAVATORY A		221		38-12-16
12MB	HEATER-WATER, LAVATORY E		262		38-12-16
14MB	HEATER-WATER, LAVATORY G		262		38-12-16
15MB	HEATER-WATER, LAVATORY D		261		38-12-16
17MB	HEATER-WATER, LAVATORY F		261		38-12-16
20MB	HEATER-WATER, LAVATORY K		232		38-12-16
24MB	HEATER-WATER, LAVATORY C		222		38-12-16
29MB	HEATER-WATER, LAVATORY H		231		38-12-16
15MD	SWITCH-PUSHBUTTON, SYST. FWD	863VU	221		
16MD	SWITCH-PUSHBUTTON, SYST. AFT	863VU	221		
17MD	VALVE-MOTORIZED, SHUTOFF SYST. FWD		138		38-15-00
18MD	VALVE-MOTORIZED, SHUTOFF SYST. AFT		138		38-15-00
381630	VALVE SHUTOFF, MANUAL, LAVATORY C		222		38-15-00
381635	VALVE SHUTOFF, MANUAL, LAVATORY A		221		38-15-00
381636	VALVE SHUTOFF, MANUAL, LAVATORY D		261		38-15-00
381637	VALVE SHUTOFF, MANUAL, LAVATORY E		262		38-15-00
381638	VALVE SHUTOFF, MANUAL, LAVATORY F		261		38-15-00
381639	VALVE SHUTOFF, MANUAL, LAVATORY G		262		38-15-00
381647	VALVE SHUTOFF, MANUAL, LAVATORY H		231		38-15-00
381648	VALVE SHUTOFF, MANUAL, LAVATORY K		232		38-15-00
381577	FAUCET-WATER, LAVATORY H		231		38-12-15
381801	FAUCET-WATER, LAVATORY A		221		38-12-15
381802	FAUCET-WATER, LAVATORY C		222		38-12-15
381804	FAUCET-WATER, LAVATORY D		261		38-12-15
381805	FAUCET-WATER, LAVATORY E		262		38-12-15
381806	FAUCET-WATER, LAVATORY F		261		38-12-15
381807	FAUCET-WATER, LAVATORY G		262		38-12-15
381922	FAUCET-WATER, LAVATORY K		232		38-12-15

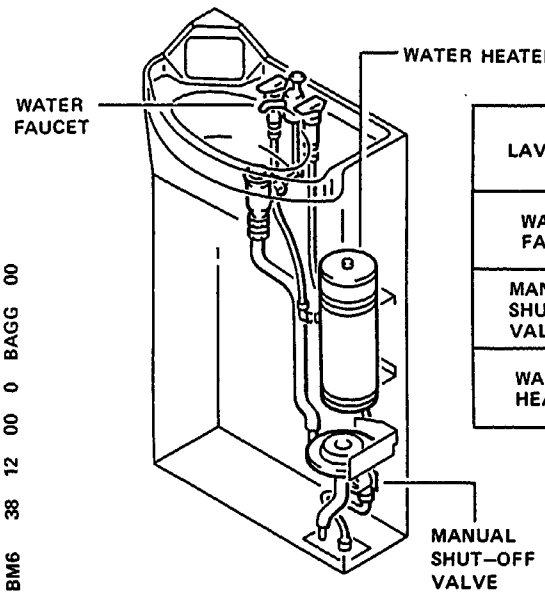
3. Description

A. Motorized Shutoff Valve

(Ref. Fig. 002)

The two motorized valves (17MD) fwd and (18MD) aft controlled electrically from the purser's panel are normally open. The fwd or the aft system can be isolated from the distribution system by closing the respective valve using pushbutton switches (15MD) fwd or (16MD) aft



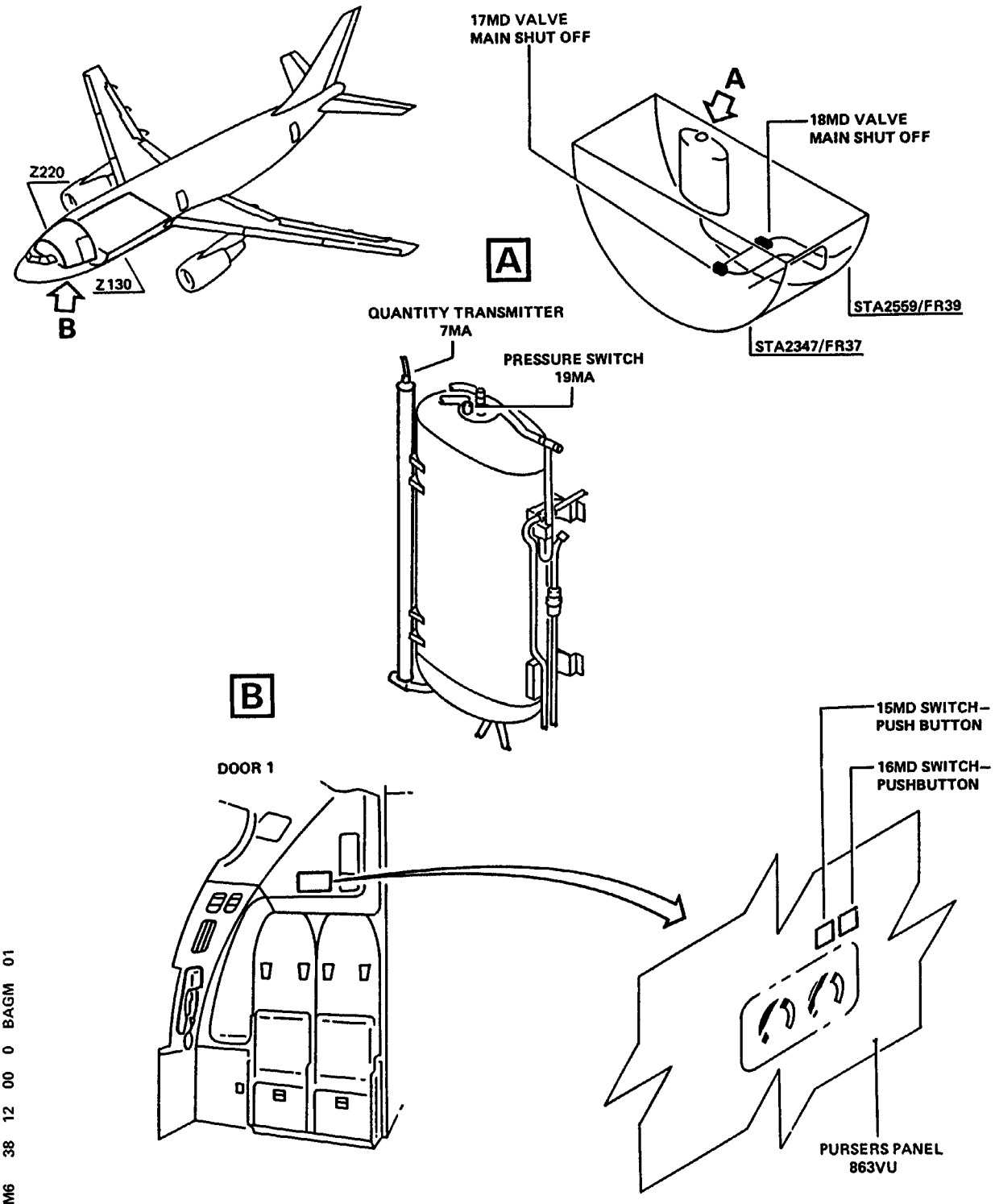


COMPONENT LIST

LAVATORY	A	C	H	K	D	E	F	G
WATER FAUCET	381801	381802	381577	381922	381804	381805	381806	381807
MANUAL SHUT–OFF VALVE	381635	381630	381647	381648	381636	381637	381638	381639
WATER HEATER	3MB	24MB	29MB	20MB	15MB	12MB	17MB	14MB

BM6 38 12 00 0 BAGG 00

Component Location (Sheet 1/2)
Figure 001



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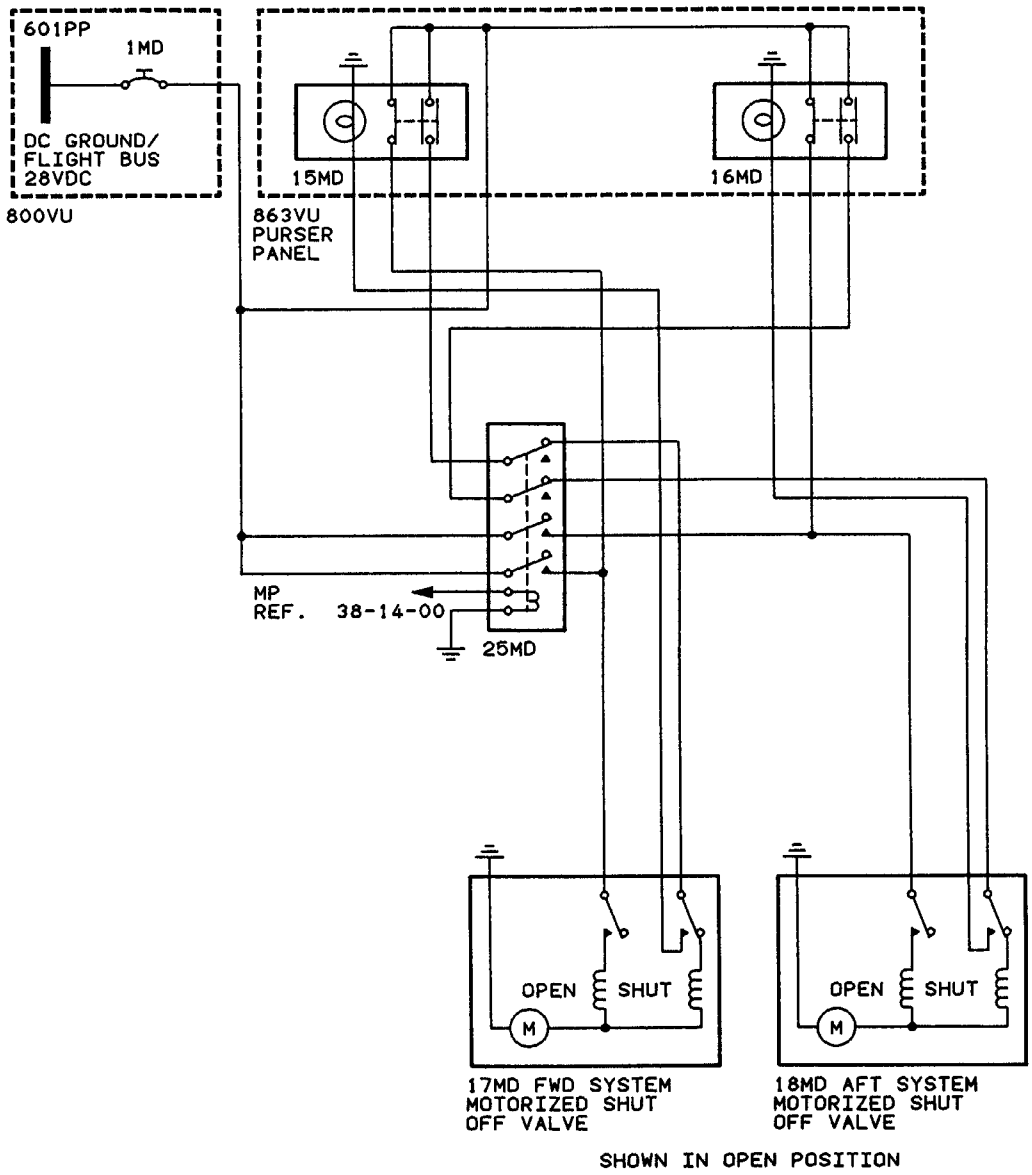
Component Location (Sheet 2/2)
Figure 001



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Electrical Schematic
Figure 002

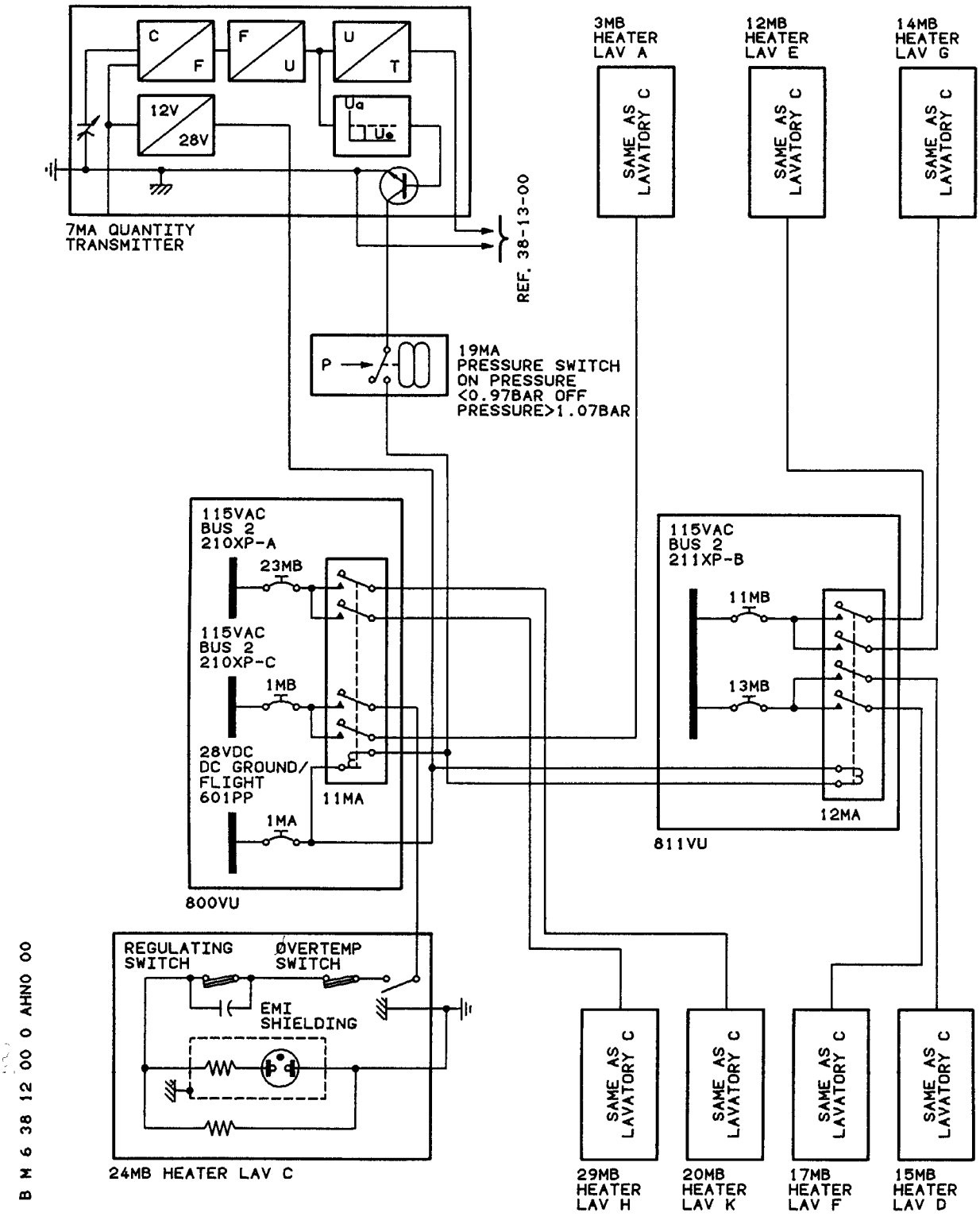
on the purser's panel (863VU). An indicator light in the respective switch comes on when the valve is closed.

B. Water Faucet
The water faucet consists of two self-venting cartridges, two time delay devices integrated in a common housing, and a common spout.
The unit is connected to the water heater and to the cold water supply lines. Two spring-loaded levers, marked with red and blue for hot and cold water respectively, when pressed down and then released, allow water to flow through the spout for a preset time of 8 - 14 sec.
The water flow stops automatically after the preset time has elapsed.
A rod, connected to the washbasin drain assembly, actuates the poppet of the drain assembly and will remain in selected position.

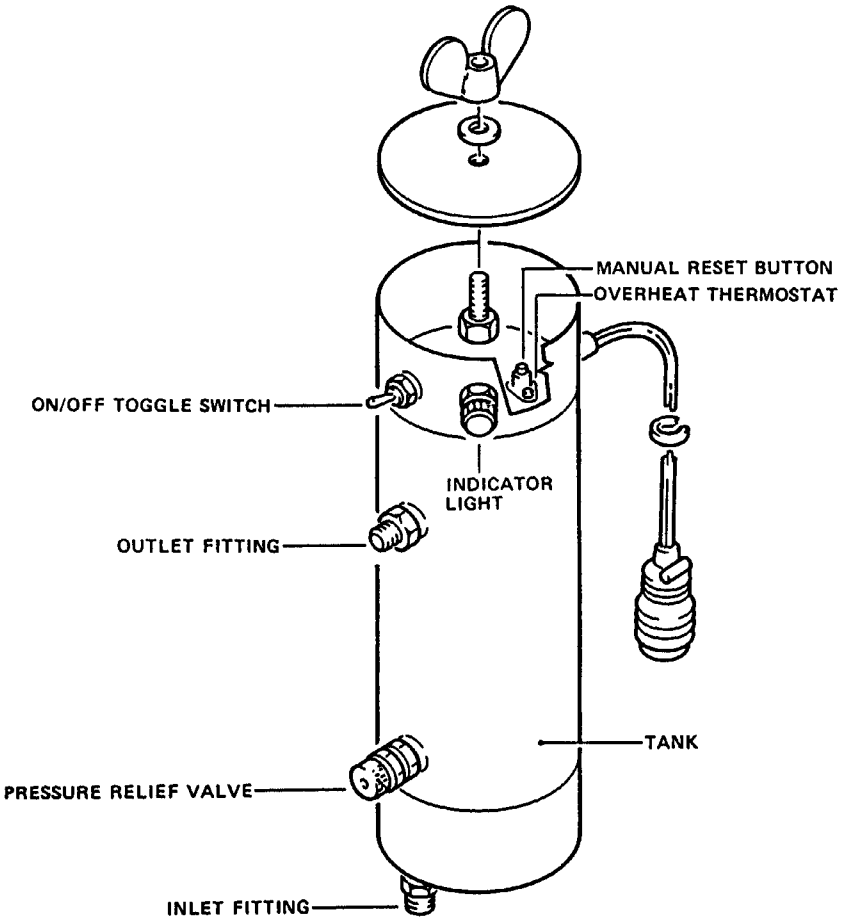
C. Manual Shutoff Valve
The valve allows the supply of potable water to the water faucet via water heater and to the vacuum toilet system. It is possible to isolate these units from the potable water supply system by closing the valve manually.
The 'open' and 'closed' position of the valve is marked.

D. Water Heater
(Ref. Fig. 003)
The water heater is installed under the washbasin with its inlet connected to the potable water supply line and the outlet to the water faucet valve marked for hot water. The amount of water which can be heated at one time is approx. 1.5 l (0.4 US gal.).
With power supply on and the toggle switch of the water heater in ON position, the heating element is energized until a preset temperature is reached at which time the heat cycle switch opens to de-energize the heating element. A pressure switch (19MA), installed on the potable water tank switches on the power supply to the water heater when the system pressure exceeds 15.5 psi (1.07 bar). The pressure switch (19MA) cuts off the power supply to the water heaters when the system pressure drops below 14 psi (0.97 bar). As hot water is replaced by cold water through usage, the temperature drops causing the heat cycle switch to close energizing the heating element again. The heat cycle switch regulates the temperature between +44 °C (111 °F) and +49 °C (120 °F). A safety switch deactivates the heater circuit when a water temperature of 60 °C ±5 °C (140 °F ±8 °F) has been reached. Manual reset of heater circuit safety switch is possible when temperature has fallen to +35 °C (95 °F) or below. The water quantity transmitter which is located at the tanks contains a low level switch to cut off the power supply to the heater, if the tank contents drops below 10%. The water heater is provided with a pressure relief valve which opens when the pressure reaches 55 psi (3.8 bar).
(Ref. Fig. 004)

4. Operation
(Ref. Fig. 005)
Water is transported from the storage system to the various availability locations assisted by compressed air. The potable water distribution system contains mechanically and manually and electrically operated valves.



Electrical Schematic
Figure 003



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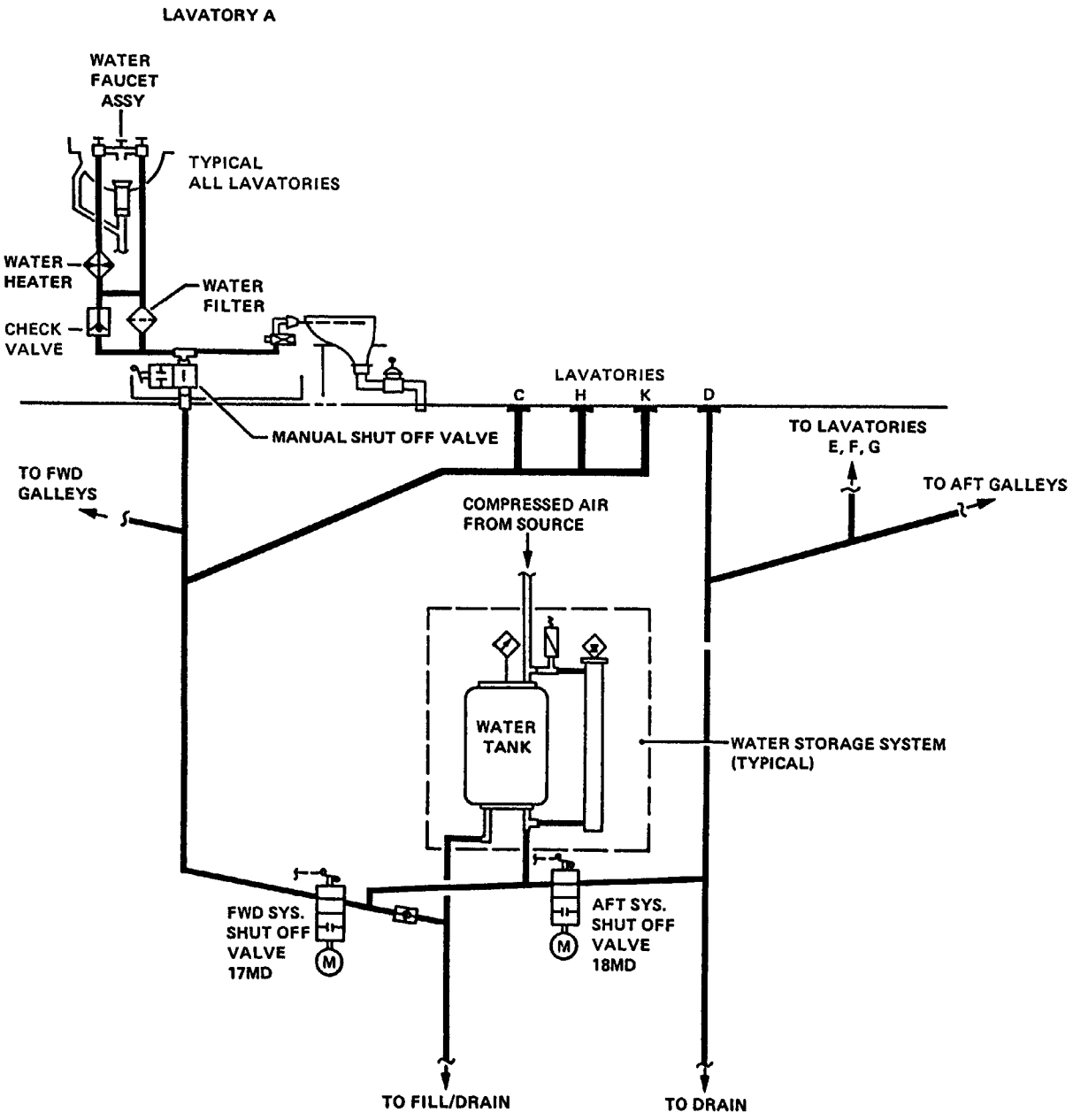
Water Heater
Figure 004



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System Diagram
Figure 005

Two main supply lines, installed underneath the cabin floor, lead to the fwd and aft sections of the aircraft. A motorized main shutoff valve (17MD) fwd and (18MD) aft is installed in each of the main supply lines. Individual manual shutoff valves are installed to enable each lavatory compartment and its components to be isolated.

1. General

The water distribution consists of a system of pipes. The pipes are routed underneath the cabin floor from the water storage system to the respective water faucets in the lavatories, the galleys and to the toilet bowl flushing system.

2. Component Location (Ref. Fig. 001)

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
7MA	TRANSMITTER-WATER QUANTITY		138		38-13-11
19MA	SWITCH-PRESSURE		138		38-41-17
3MB	HEATER-WATER, LAVATORY A		221		38-12-16
18MB	HEATER-WATER, LAVATORY W		242		38-12-16
19MB	HEATER-WATER, LAVATORY T		241		38-12-16
30MB	HEATER-WATER, LAVATORY Z		252		38-12-16
31MB	HEATER-WATER, LAVATORY Y		251		38-12-16
	HEATER-WATER, LAVATORY X		250		38-12-16
15MD	SWITCH-PUSHBUTTON, SYST. FWD	863VU	221		
16MD	SWITCH-PUSHBUTTON, SYST. AFT	863VU	221		
17MD	VALVE-MOTORIZED, SHUTOFF SYST. FWD		138		38-15-00
18MD	VALVE-MOTORIZED, SHUTOFF SYST. AFT		138		38-15-00
381635	VALVE SHUTOFF, MANUAL, LAVATORY A		221		38-15-00
381645	VALVE SHUTOFF, MANUAL, LAVATORY T		241		38-15-00
381646	VALVE SHUTOFF, MANUAL, LAVATORY W		242		38-15-00
381653	VALVE SHUTOFF, MANUAL, LAVATORY Y		251		38-15-00
381654	VALVE SHUTOFF, MANUAL, LAVATORY Z		252		38-15-00
	VALVE SHUTOFF, MANUAL, LAVATORY X		250		38-15-00
	FAUCET-WATER, LAVATORY X		250		38-12-15
381585	FAUCET-WATER, LAVATORY Y		251		38-12-15
381586	FAUCET-WATER, LAVATORY Z		252		38-12-15
381800	FAUCET-WATER, LAVATORY T		241		38-12-15
381801	FAUCET-WATER, LAVATORY A		221		38-12-15
381803	FAUCET-WATER, LAVATORY W		242		38-12-15

3. Description

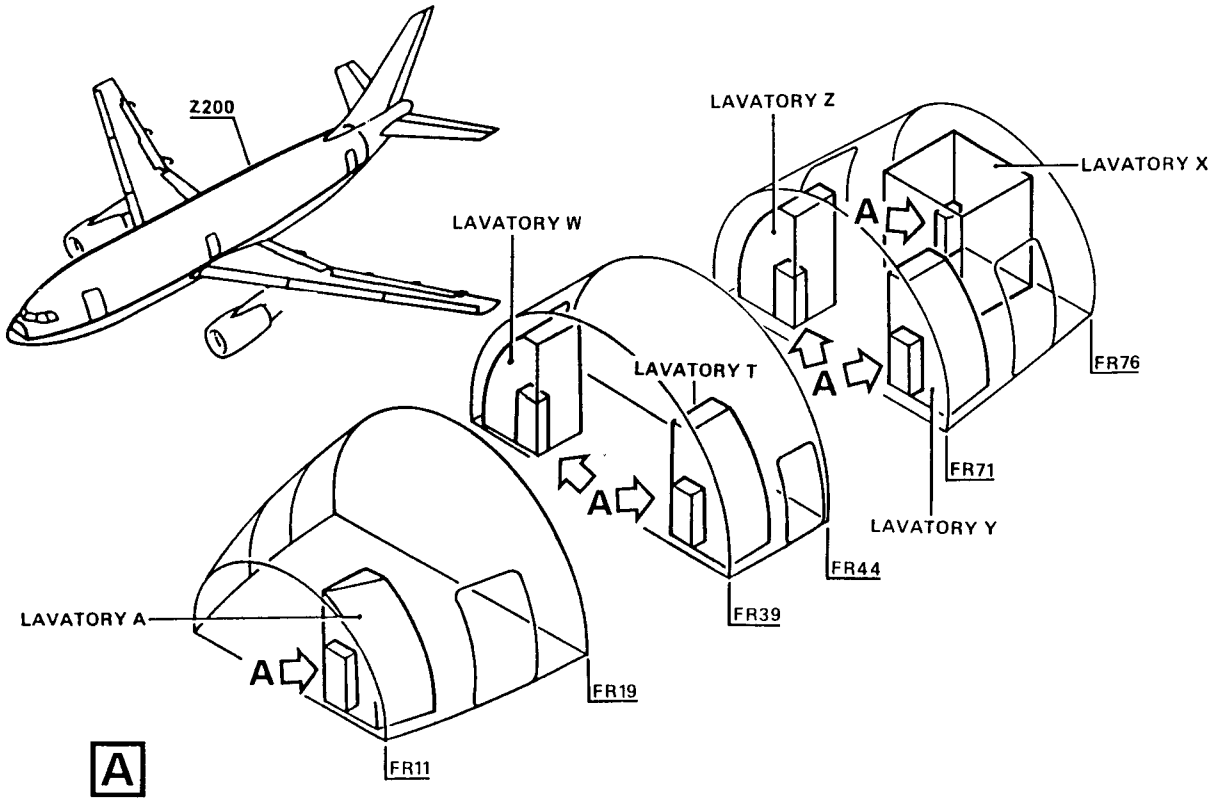
A. Motorized Shutoff Valve (Ref. Fig. 002)

The two motorized valves (17MD) fwd and (18MD) aft controlled electrically from the purser's panel are normally open. The fwd or the aft system can be isolated from the distribution system by closing the respective valve using pushbutton switches (15MD) fwd or (16MD) aft on the purser's panel (863VU). An indicator light in the respective switch comes on when the valve is closed.

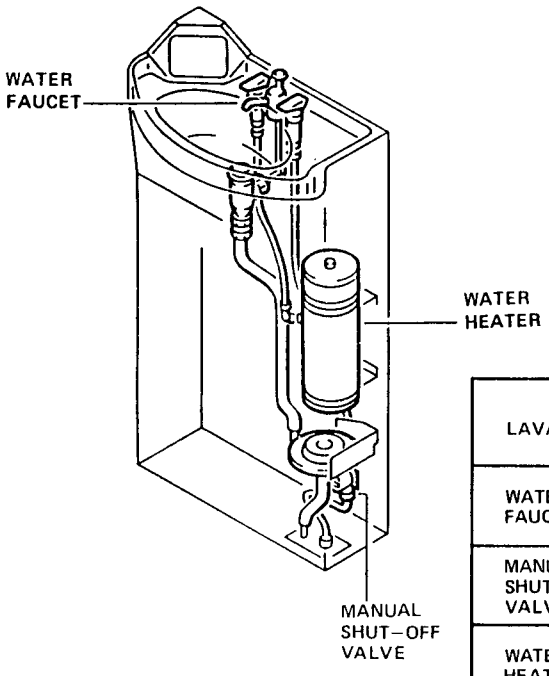
B. Water Faucet

(1)Water Faucet in Lavatory A, T, W, Y and Z

The water faucet consists of two self-venting cartridges, two time delay



A



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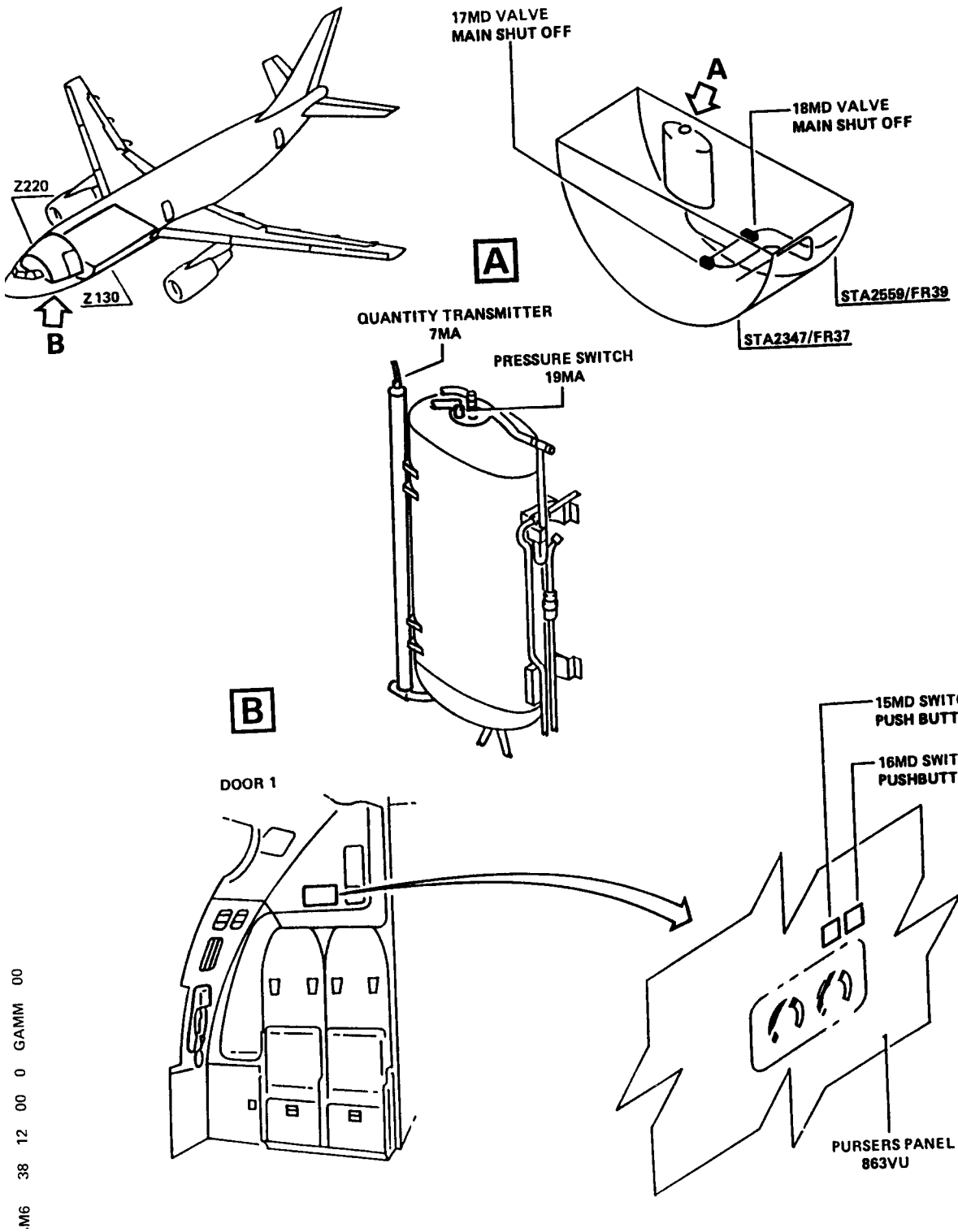
COMPONENT LIST

LAVATORY	A	T	W	X	Y	Z
WATER FAUCET	381801	381800	381803		381585	381586
MANUAL SHUT-OFF VALVE	381635	381645	381646		381653	381654
WATER HEATER	3MB	19MB	18MB		31MB	30MB

Component Location (Sheet 1/2)
Figure 001



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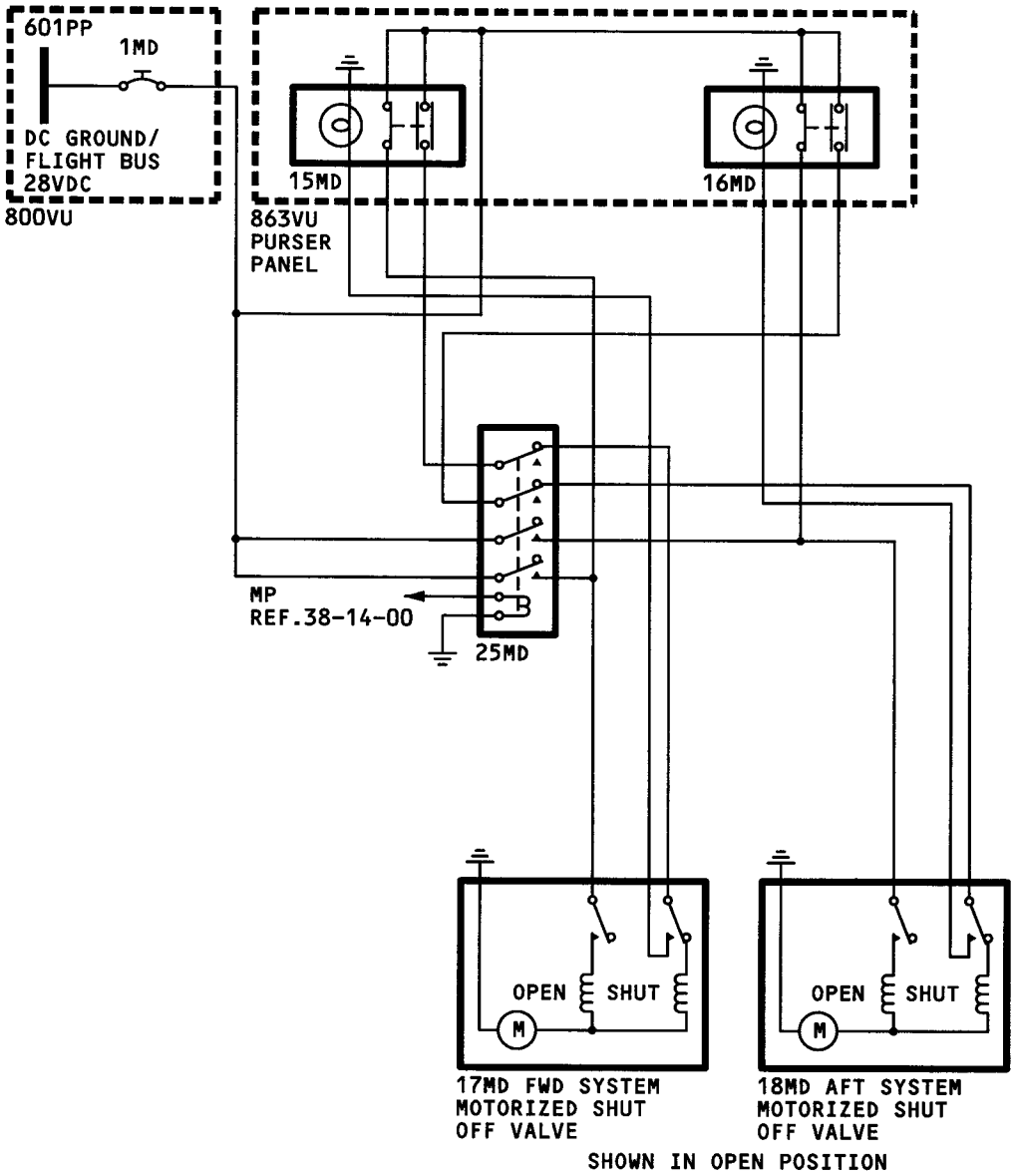
Component Location (Sheet 2/2)
Figure 001



BM6 38 12 00 0 GCMO 00

Electrical Schematic
Figure 002

devices integrated in a common housing, and a common spout.
The unit is connected to the water heater and to the cold water supply lines. Two spring-loaded levers, marked with red and blue for hot and cold water respectively, when pressed down and then released, allow water to flow through the spout for a preset time of 8 - 14 sec.
The water flow stops automatically after the preset time has elapsed.
A rod, connected to the washbasin drain assembly, actuates the poppet of the drain assembly and will remain in selected position.

(2)Water Faucet in Lavatory X
The water faucet consists of a self-venting mixing valve, a push knob and a spout. The mixing valve has a time delay device. The valve is connected to the water heater and to the cold water supply line. The push knob is installed on the mixing valve. It has hot (red) and cold (blue) water identification and selection arrows. When operating the push knob, the water flows and stops automatically at the end of the mixing-valve time delay sequence of 10 ± 2 seconds.

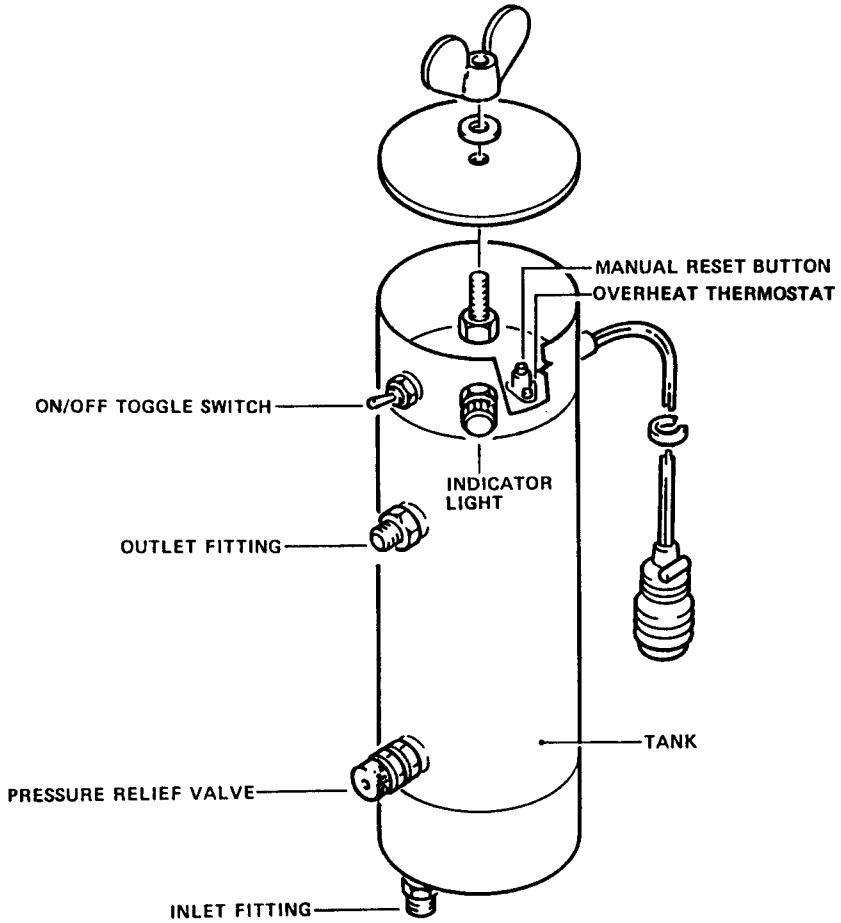
C. Manual Shutoff Valve
The valve allows the supply of potable water to the water faucet via water heater and to the vacuum toilet system. It is possible to isolate these units from the potable water supply system by closing the valve manually. The 'open' and 'closed' position of the valve is marked.

D. Water Heater (Ref. Fig. 005)
(1)Water heater in Lavatory A, T, W, Y and Z (Ref. Fig. 003)
The water heater is installed under the washbasin with its inlet connected to the potable water supply line and the outlet to the water faucet valve marked for hot water. The amount of water which can be heated at one time is approx. 1.5 l (0.4 US gal.).
With power supply on and the toggle switch of the water heater in ON position, the heating element is energized until a preset temperature is reached at which time the heat cycle switch opens to de-energize the heating element. A pressure switch (19MA), installed on the potable water tank switches on the power supply to the water heater when the system pressure exceeds 15.5 psi (1.07 bar). The pressure switch (19MA) cuts off the power supply to the water heaters when the system pressure drops below 14 psi (0.97 bar).
As hot water is replaced by cold water through usage, the temperature drops causing the heat cycle switch to close energizing the heating element again. The heat cycle switch regulates the temperature between +44 °C (111 °F) and +49 °C (120 °F). A safety switch deactivates the heater circuit when a water temperature of 60 °C ±5 °C (140 °F ±8 °F) has been reached. Manual reset of heater circuit safety switch is possible when temperature has fallen to +35 °C (95 °F) or below. The water quantity transmitter which is located at the tanks contains a low level switch to cut off the power supply to the heater, if the tank contents drops below 10%. The water heater is provided with a pressure relief valve which opens when the pressure reaches 55 psi (3.8 bar).

(2)Water heater in Lavatory X (Ref. Fig. 004)
The water heater is installed under the washbasin with its inlet connected to the potable water supply line and the outlet to the water

faucet valve marked for hot water. The amount of water which can be heated at one time is approx. 1.5 l (0.4 US gal.).
With power supply on and the toggle switch of the water heater in **ON** position, the green indicator light comes on and the heating element is energized until a preset temperature is reached at which time a thermostat opens to de-energize the heating element.
The thermostat opens when the water temperature is more than 48 °C (118 °F). It closes when the water temperature is less than 40 °C (104 °F). An overtemperature switch de-energizes the water heater if the water temperature increases to 60 °C ±5 °C (140 °F ±8 °F), to protect the heating element. Manual reset of overtemperature switch is possible when temperature has fallen to +7 °C (45 °F) or below. A pressure sensor stops the electrical power supply to the heating element if the pressure decreases to below 0.5 bar (7.3 psi). The sensor is reset automatically if the system pressure increases to 0.6 bar (9.4 psi). A pressure relief valve opens if the pressure in the system increases to more than 9.6 bar (140 psi). A low contents device stops the power supply to the heating element if the water contents decrease to 1l (0.3 US gal). The device is reset automatically when the water contents increase to more than this level.

4. Operation (Ref. Fig. 006)
Water is transported from the storage system to the various availability locations assisted by compressed air. The potable water distribution system contains mechanically, manually and electrically operated valves. Two main supply lines, installed underneath the cabin floor, lead to the fwd and aft sections of the aircraft. A motorized main shutoff valve (17MD) fwd and (18MD) aft is installed in each of the main supply lines. Individual manual shutoff valves are installed to enable each lavatory compartment and its components to be isolated.



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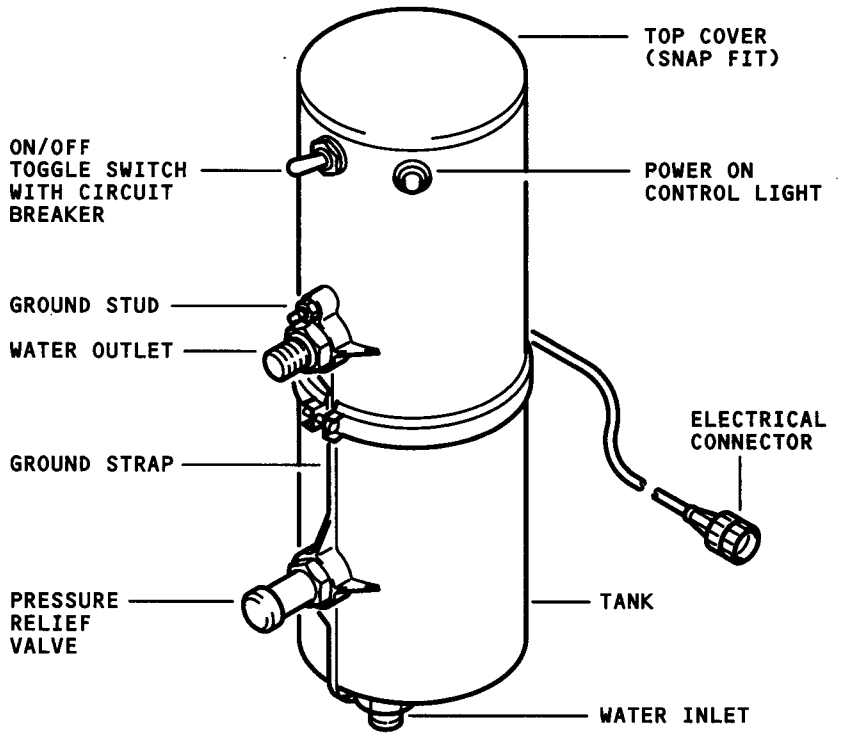
Water Heater
Figure 003



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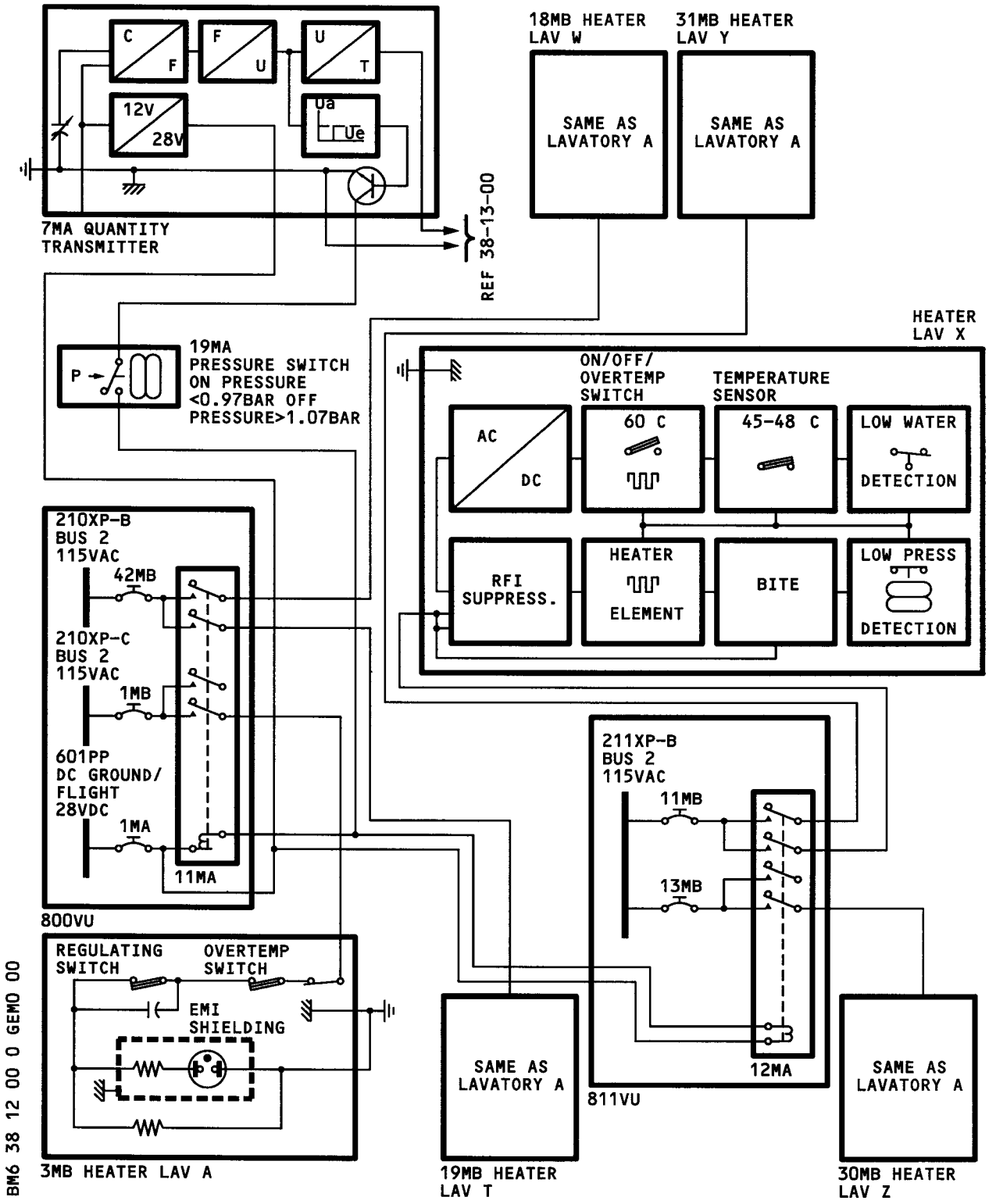
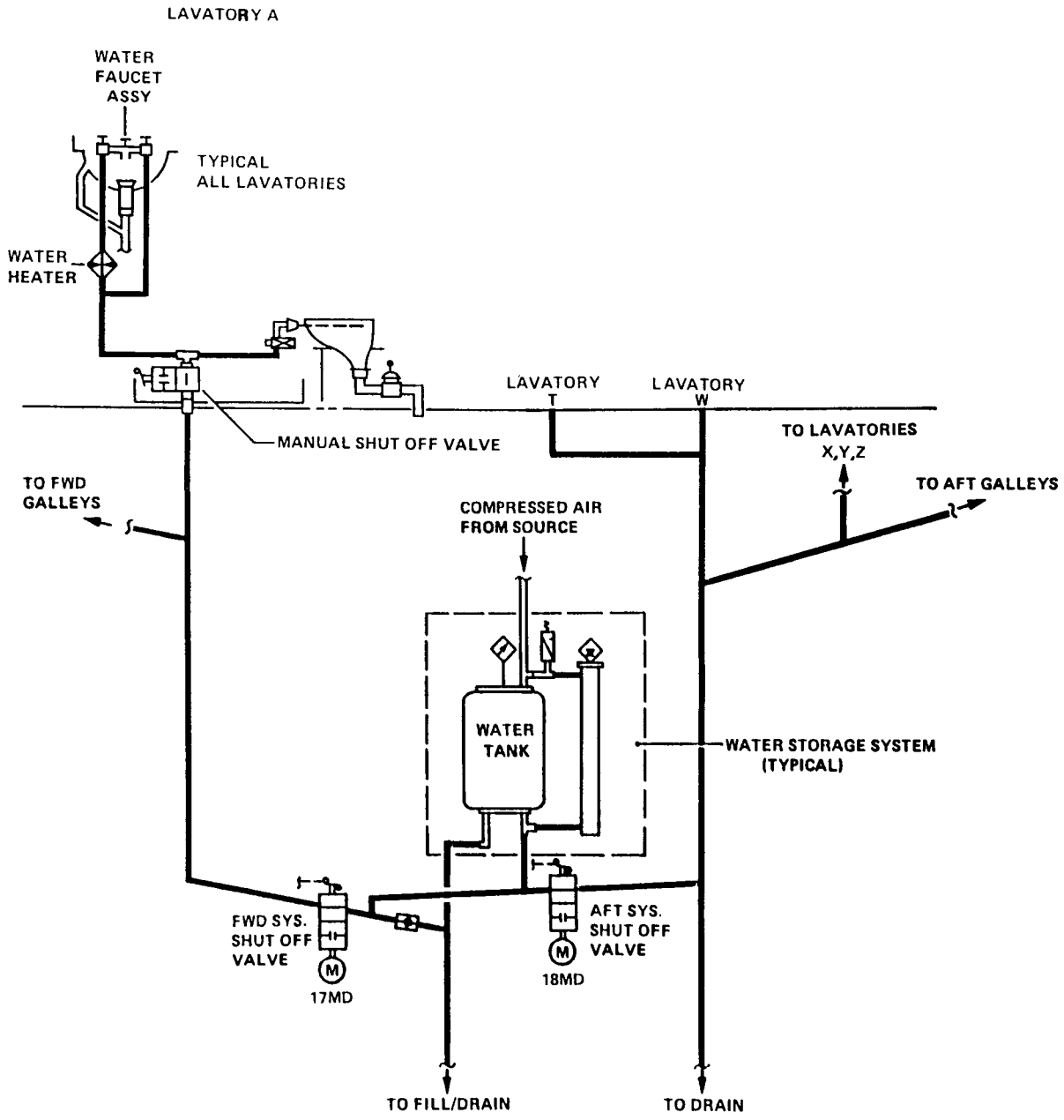
Water Heater
Figure 004



Electrical Schematic
Figure 005



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System Diagram
Figure 006

1. System Functional Test

A. Equipment and Materials

ITEM	DESIGNATION
(1)	Two Containers - Capacity 80 l (21.14 US gal.)
(2)	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 38-40-00, P. Block 301	Air Supply

B. Procedure

(1)Job Set-Up

(a)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).

(b)Make certain that electronics racks ventilation is correct.

(c)Replenish potable water system (Ref. 12-15-38, P. Block 1) with 80 l (21.14 US gal.).

(d)Pressurize potable water system (Ref. 38-40-00, P. Block 301).

(e)Make certain that the following circuit breakers are closed:

	PANEL	SERVICE	IDENT.	LOCATION
R	**ON A/C 001-100,			
	800VU	WATER SYSTEM	1MA	H 5
	800VU	LAVATORY FWD & MID/HOT WATER	1MB	G 7
	800VU	LAVATORY FWD & MID/HOT WATER	23MB	G 8
	800VU	WATER SYSTEM	1MD	H 6
	811VU	LAVATORY AFT/HOT WATER	11MB	B 4
	811VU	LAVATORY AFT/HOT WATER	13MB	B 5
R	**ON A/C 101-200,			
R	800VU	WATER SYSTEM	1MA	H 5
R	800VU	LAVATORY FWD & MID/HOT WATER	1MB	G 7
R	800VU	LAVATORY FWD & MID/HOT WATER	43MB	G 8
R	800VU	WATER SYSTEM	1MD	H 6
R	800VU	WATER SYSTEM	1MP	H 7
R	811VU	LAVATORY AFT/HOT WATER	11MB	B 4
R	811VU	LAVATORY AFT/HOT WATER	13MB	B 5

R **ON A/C ALL

(f)Make certain FWD and AFT motorized shutoff valves (17MD, 18MD) are open.
(g)Make certain water heaters are off, washbasin drain assemblies and manual shutoff valves are open.
(h)Position containers under drain masts.

(2)Test

ACTION	RESULT
1. On washbasins: - Depress cold water faucet. NOTE : When time delayed water faucets are activated, a water flow of approx. 8 - 12 sec. is initiated.	On washbasins: - Water flows from faucet. NOTE : Water drains via drain masts.
2. In sanitary cabinets: - Place manual shutoff valve in CLOSED position.	
3. On washbasins: - Depress cold water faucet again.	On washbasins: - Water flow stops after a while.
4. In sanitary cabinets: - Place manual shutoff valve in OPEN position.	
5. On purser's panel (863VU): - Press pushbuttons WATER FWD SHUT (15MD) and WATER AFT SHUT (16MD).	On purser's panel (863VU): - Indicator lights in the pushbuttons WATER FWD SHUT (15MD) and WATER AFT SHUT (16MD) come on. In A/C underfloor zone 130: - Motorized shutoff valves (17MD) fwd system and (18MD) aft system are in the CLOSED position.
6. On a fwd and aft washbasin: - Depress cold water faucet.	On washbasin: - Water flow stops after a while.
7. On purser's panel (863VU): - Press pushbuttons WATER FWD SHUT (15MD) and WATER AFT SHUT (16MD).	On purser's panel (863VU): - Indicator lights in pushbuttons WATER FWD SHUT (15MD) and WATER AFT SHUT (16MD) go off. In A/C underfloor zone 130: - Motorized shutoff valves (17MD) fwd system and (18MD) aft system are in the OPEN position.
8. On any lavatory water heater: - Place on/off toggle switch in ON position.	On lavatory water heater: - Indicator light comes on.
9. Depressurize potable water system (Ref. 38-40-00, P. Block 301).	On lavatory water heater: - Indicator light goes off. NOTE : Power supply to the water heaters is interrupted by pressure switch (19MA) when pressure reaches a pre-determined minimum value.
10. On lavatory water heater: - Place on/off toggle switch in OFF position.	

ACTION	RESULT
11. Pressurize potable water system (Ref. 38-40-00, P. Block 301).	
12. On lavatory water heaters: - Place on/off toggle switch in ON position.	On lavatory water heaters: - Indicator light comes on. NOTE : Water must be tepid after approx. 10 minutes.
13. On lavatory water heaters: - Place on/off toggle switch in OFF position.	On lavatory water heaters: - Indicator light goes off.
14. On washbasins: - Depress hot water faucet.	On washbasins: - Water must be tepid and flow free of air bubbles. NOTE : Water drains via drain masts.
15. On any lavatory water heater: - Place on/off toggle switch in ON position.	On lavatory water heater: - Indicator light comes on.
16. On washbasin: - Depress hot water faucet and hold in the OPEN position.	On washbasin: - Water flows continuously from faucet. NOTE : Water drains via drain mast. On lavatory water heater: - Indicator light goes off. NOTE : Power supply to the water heaters is interrupted by a low level switch in quantity transmitter (7MA) when the water tank system contents reaches a predetermined minimum level.
17. On washbasin: - Release hot water faucet.	
18. On lavatory water heater: - Place on/off toggle switch in OFF position.	

(3)Close-Up

(a)Drain potable water system (Ref. 12-24-38, P. Block 1).

(b)De-energize the aircraft electrical network and disconnect ground power unit (Ref. 24-41-00, P. Block 301).

(c)Remove containers under drain masts.

(d)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

MOTORIZED SYSTEM SHUTOFF VALVES - REMOVAL/INSTALLATION

R 1. Reason for the Job

R A. Removal of motorized system shutoff valves.

R B. Removal of motorized system shutoff valve actuator.

R 2. Motorized System Shutoff Valves

R A. Equipment and Materials

ITEM	DESIGNATION
R 1.	Circuit Breaker Safety Clips and Tags
R 2.	Blanking Caps and Plugs
R 3.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
R 4. Material No. 05-022	Special Materials (Ref. 20-31-00)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 38-40-00, P. Block 301	Air Supply

R B. Procedure

R (1)Job Set-Up

R (a)Drain potable water system (Ref. 12-24-38, P. Block 1).

R (b)Remove access door 136AR.

R (c)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5
800VU	WATER SYSTEM	1MD	H6

R (2)Removal (Ref. Fig. 401)

R (a)Disconnect electrical connectors (1).

R (b)Install blanking caps to electrical connections.

R (c)Disconnect unions (2, 3).

R (d)Remove nuts (5), washers (6) and bolts (8).

R (e)Remove shutoff valves (4).

R (f)Install blanking caps and plugs to all openings.

R (3)Preparation for Installation (Ref. Fig. 401)

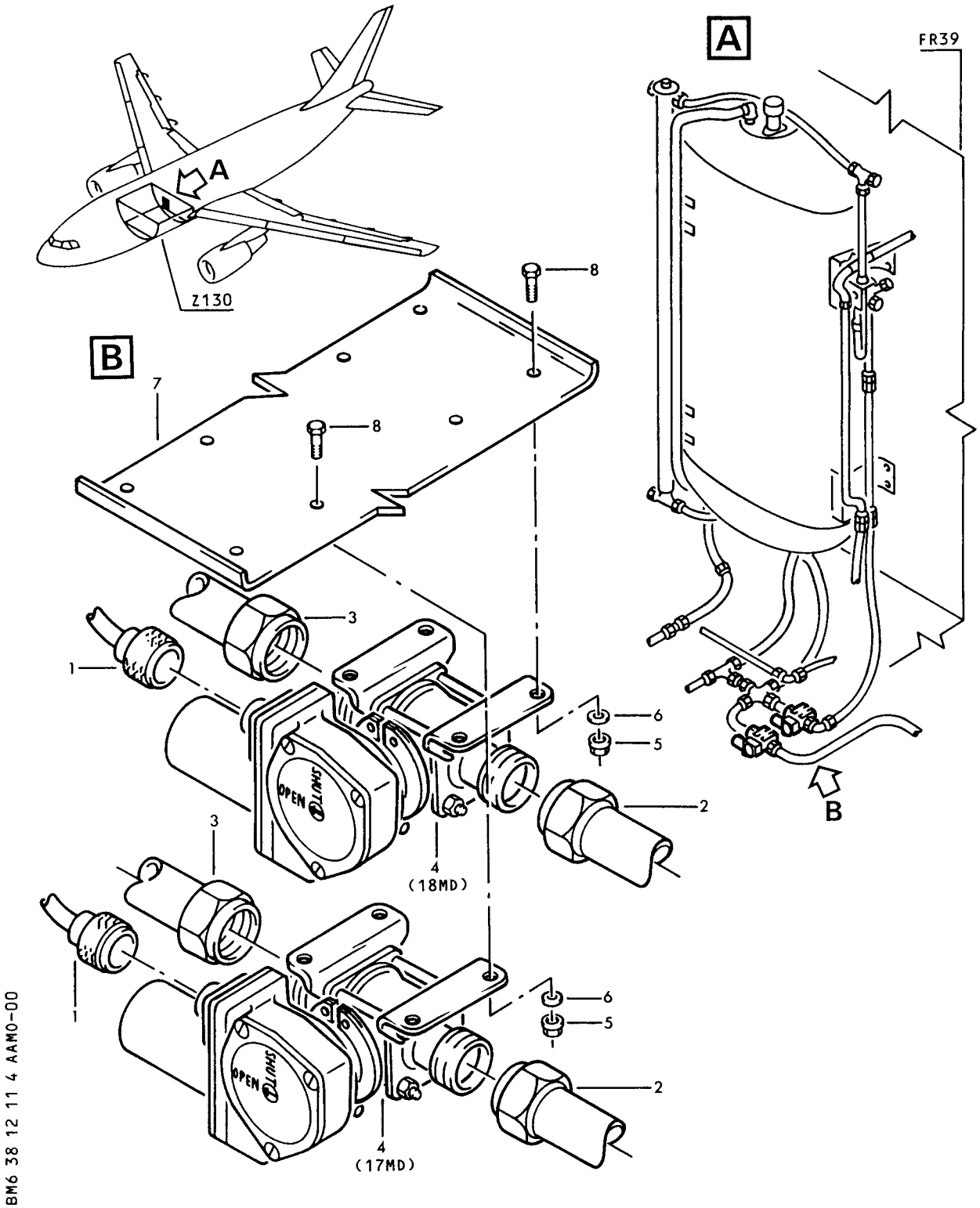
R (a)Remove old sealing tape from fittings.

R (b)Wrap sealing tape (Mat. No. 05-022) around threads of fittings.

R (c)Make certain that shutoff valves (4) are clean and no external damage is visible.

R (d)Remove all blanking caps and plugs from openings and electrical connections.

R (4)Installation (Ref. Fig. 401)



Motorized System Shutoff Valves
Figure 401

R (a)Put shutoff valves (4) in position under bracket (7).
R (b)Install bolts (8), washers (6) and nuts (5).
R (c)Connect unions (2, 3).
R (d)Connect electrical connectors (1).
R (5)Test
R (a)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
R (b)Replenish potable water system (Ref. 12-15-38, P. Block 1) and pressurize water system (Ref. 38-40-00, P. Block 301).
R (c)Check all connections for leakage.
NOTE : Leakage is not permissible.
R (d)Remove safety clips and tags and close circuit breakers 1MA, 1MD.
R (e)Test

ACTION	RESULT
1. On purser's panel 863VU: - press WATER SYST push-button switches.	On purser's panel 863VU: - switch lights come on. - main shutoff valves close.
2. On purser's panel 863VU: - release WATER SYST pushbutton switches 15MD and 16MD.	On purser's panel 863VU: - switch lights go off. In zone 138: - main shutoff valves open. NOTE : Valve operation audible (motor) and visible (indicator on valves).

R (6)Close-Up
R (a)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
R (b)Install access door 136AR.
R (c)De-energize the aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

R 3. Shutoff Valve Actuator

R A. Equipment and Materials

R ITEM	DESIGNATION
R 1.	Circuit Breaker Safety Clips and Tags
R 2.	Blanking Caps
R 3.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
R 4. Material No. 05-022	Special Materials (Ref. 20-31-00)

R Referenced Procedures

R - 12-15-38, P. Block 1	Replenishing Potable Water
R - 12-24-38, P. Block 1	Potable Water System - Draining
R - 24-41-00, P. Block 301	AC External Power Control
R - 38-40-00, P. Block 301	Air Supply

R B. Procedure
R (1)Job Set-Up
R (a)Remove access door 136AR.
R (b)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5
800VU	WATER SYSTEM	1MD	H6

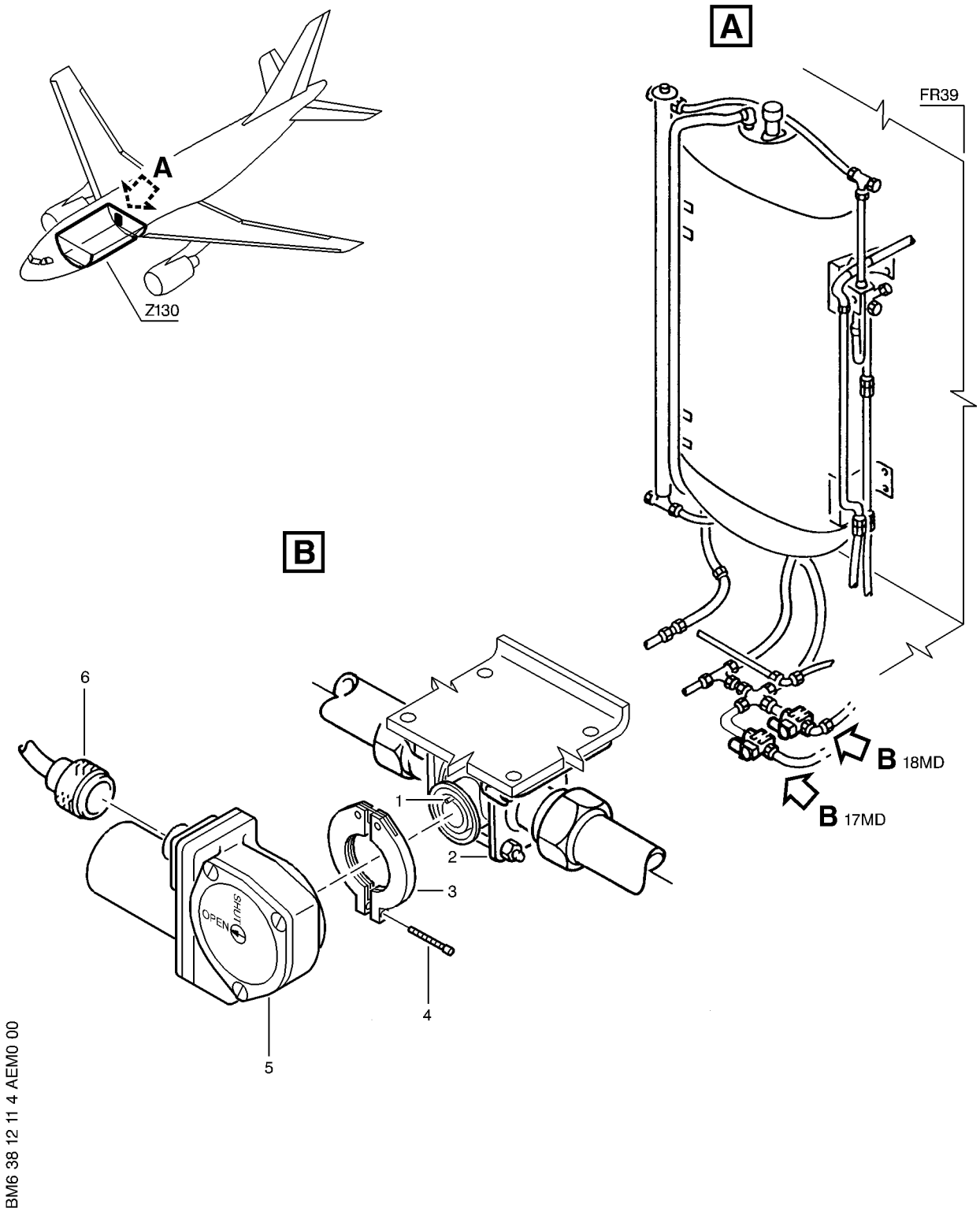
R (2)Removal (Ref. Fig. 402)
R (a)Disconnect the electrical connector (6).
R (b)Install the blanking caps on the electrical connections.
R (c)Remove the screw (4) and the clamp (3).
R (d)Remove the actuator (5) from the shutoff valve (2).
R (3)Installation (Ref. Fig. 402)
R (a)Install the actuator (5) on the shutoff valve (2).

R NOTE : Install the actuator (5) so that the slot in the base aligns with the dowel (1) in the valve body (2).

R (b)Install the clamp (3) and tighten the screw (4).
R (c)Remove the blanking caps from the electrical connections.
R (d)Connect the electrical connector (6).
R (4)Test
R (a)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
R (b)Replenish potable water system (Ref. 12-15-38, P. Block 1) and pressurize water system (Ref. 38-40-00, P. Block 301) if necessary.
R (c)Remove safety clips and tags and close circuit breakers 1MA, 1MD.
R (d)Test

ACTION	RESULT
1. On purser's panel 863VU: - press WATER SYST push-button switches 15MD and 16MD.	On purser's panel 863VU: - switch lights come on. - main shutoff valves close.
2. On purser's panel 863VU: - release WATER SYST pushbutton switches 15MD and 16MD.	On purser's panel 863VU: - switch lights go off. In zone 138: - main shutoff valves open. NOTE : Valve operation audible (motor) and visible (indicator on valves).

R (5)Close-Up
R (a)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
R (b)Install access door 136AR.
R (c)De-energize the aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).



Motorized System Shutoff Valve Actuator
Figure 402

R

MANUAL SHUTOFF VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps and Plugs
B. Material No. 05-022	Special Materials (Ref. 20-31-00)
Referenced Procedures	
- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 38-40-00, P. Block 301	Air Supply

2. Procedure

A. Job Set-Up
(1)Drain potable water system (Ref. 12-24-38, P. Block 1).
(2)Open sanitary unit cabinet door in lavatory.

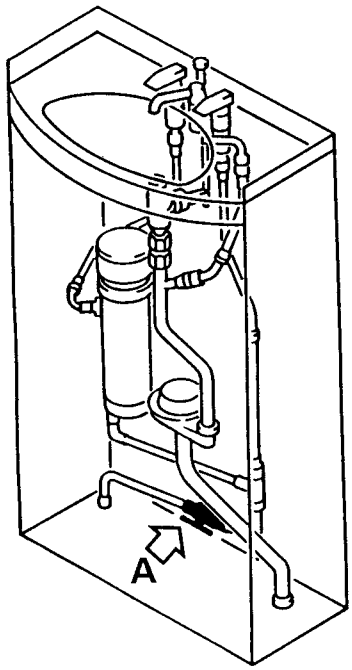
B. Removal (Ref. Fig. 401)
(1)Disconnect unions (1).
(2)Remove bolts (2) and washers (3).
(3)Remove shutoff valve (4).
(4)Install blanking caps and plugs to all openings.

C. Preparation for Installation
(1)Remove old sealing tape from fittings.
(2)Wrap sealing tape (Mat. No. 05-022) around threads of fittings.
(3)Make certain that shutoff valve (4) is clean and no external damage is visible.
(4)Remove all blanking caps and plugs from openings.

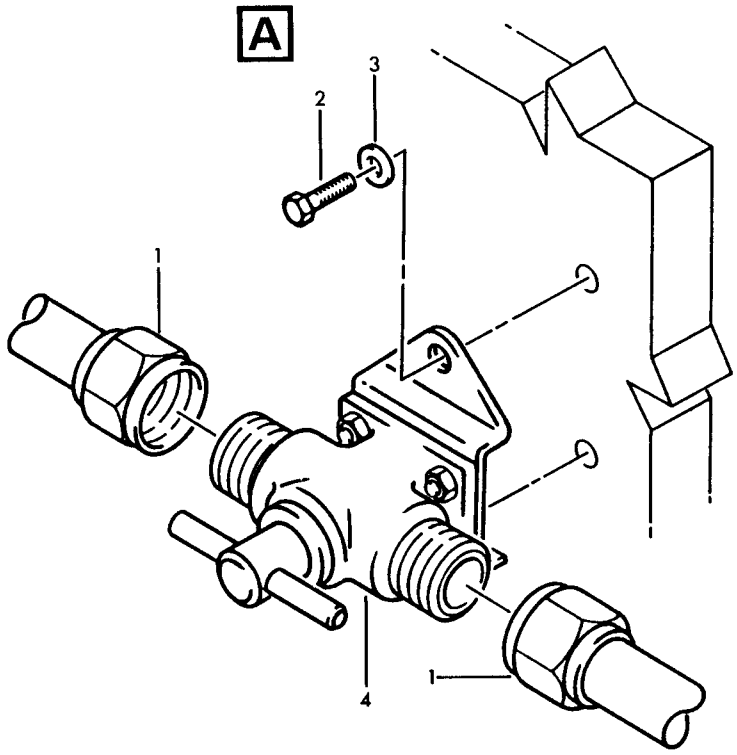
D. Installation (Ref. Fig. 401)
(1)Put shutoff valve (4) in position.
(2)Install bolts (2) and washers (3).
(3)Connect unions (1).

E. Test
(1)Replenish potable water system (Ref. 12-15-38, P. Block 1) and pressurize water system (Ref. 38-40-00, P. Block 301).
(2)Check all connections for leakage.
NOTE : Leakage is not permissible.
(3)Open water faucet and check that water flows.
(4)Close shutoff valve (4) and check that water flow stops.
(5)Open shutoff valve (4).

F. Close-Up
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Close sanitary unit cabinet door.



SANITARY UNIT CABINET
TYPICAL LAYOUT



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Manual Shutoff Valve
Figure 401

WASH BASIN FAUCET - SERVICING

1. Reason for the Job

A. Dripping Tap

R 2. Replacement of Tap Packings

R A. Equipment and Materials

ITEM	DESIGNATION
A.	Packings
B. T2595-5	Spanner Wrench

Referenced Procedure

- 12-15-38, P. Block 1	Replenishing Potable Water

R B. Procedure

R NOTE : Procedure valid for all wash basin faucets.

R (1)Job Set-Up

R (a)Open sanitary unit cabinet door in appropriate lavatory, close manual shutoff valve and place water heater ON/OFF switch in OFF position.

R (b)Open water faucets (hot and cold) and allow water to drain.

R (2)Removal of packings

R (Ref. Fig. 301)

R (a)Push in spring-loaded pivot pins (1) and remove handle (2) from faucet hinge assembly (4).

R NOTE : Use 0.125 in. (3.2 mm) diameter pin, or similar tool.

R (b)Remove knurled nut (3) and faucet hinge assembly (4).

R (c)Remove escutcheon (5) from valve body (7).

R (d)Unscrew and remove cartridge assembly (6) or alternative cartridge assembly from valve body (7).

R NOTE : Use spanner wrench, T2595-5 for alternative cartridge.

R (e)Remove and discard packings (8, 9) from cartridge assembly (6).

R (Ref. Fig. 301)

R (3)Installation of packings

R (Ref. Fig. 301)

R (a)Install new packings (8, 9) on cartridge assembly (6).

R (b)Install cartridge assembly (6) in valve body (7) and torque cartridge to 25 lbf.in (0.283 m.daN) maximum.

R (c)Install and escutcheon (5) on valve body (7).

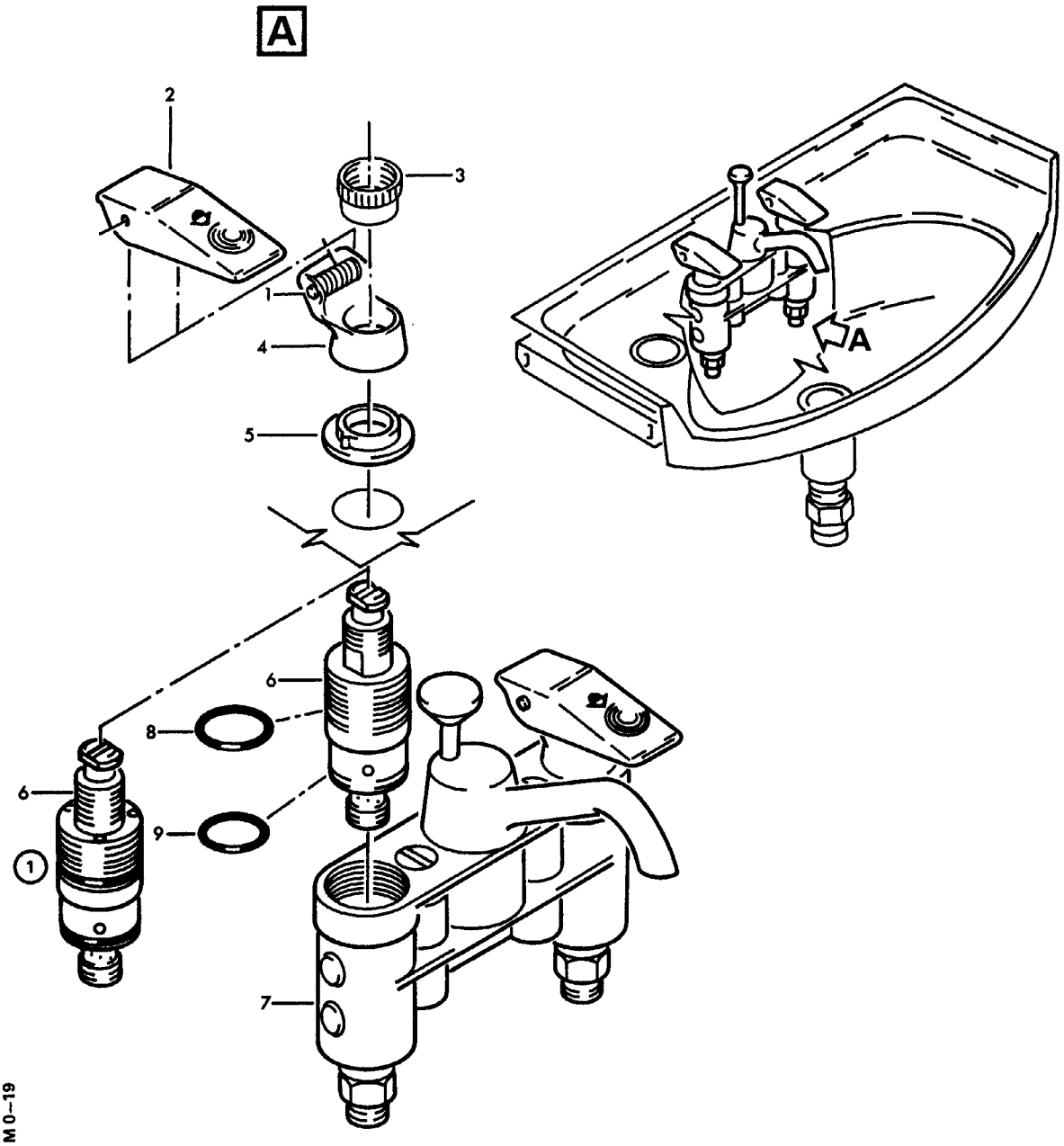
R (d)Install faucet hinge assembly (4) on cartridge assembly (6) and secure with knurled nut (3).

R (e)Install handle (2) on faucet hinge assembly (4) by engaging holes in handle with ends of related pins (1).

R (4)Test

R (a)Check for proper spring-loaded action of handle (2).

R (b)Open shutoff valve in sanitary unit cabinet and place water heater ON/OFF switch in ON position, if applicable.



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(1) ALTERNATIVE CARTRIDGE

R

Replacement of Packings
Figure 301

R (c)Open and close faucet several times.
R NOTE : Water must not run after the faucet is closed.
R (5)Close-Up
R (a)Replenish potable water, if necessary (Ref. 12-15-38, P. Block 1).
R (b)Close sanitary unit cabinet door.
R (c)Make certain that working area is clean and clear of tools and miscel-
R laneous items of equipment.

WASH BASIN FAUCET - REMOVAL/INSTALLATION

CAUTION : RESTRAIN FITTINGS WHILE DETACHING/ATTACHING THE GLAND NUTS OF HOSES.

1. Reason for the Job

A. Removal of lavatory washbasin fixtures.

2. Equipment and Materials

ITEM	DESIGNATION
A.	Torque Wrench, up to 1 m.daN (88 lbf.in.)
B.	O-ring
C.	Gasket
D. Material No. 05-022	Special Materials (Ref. 20-31-00)

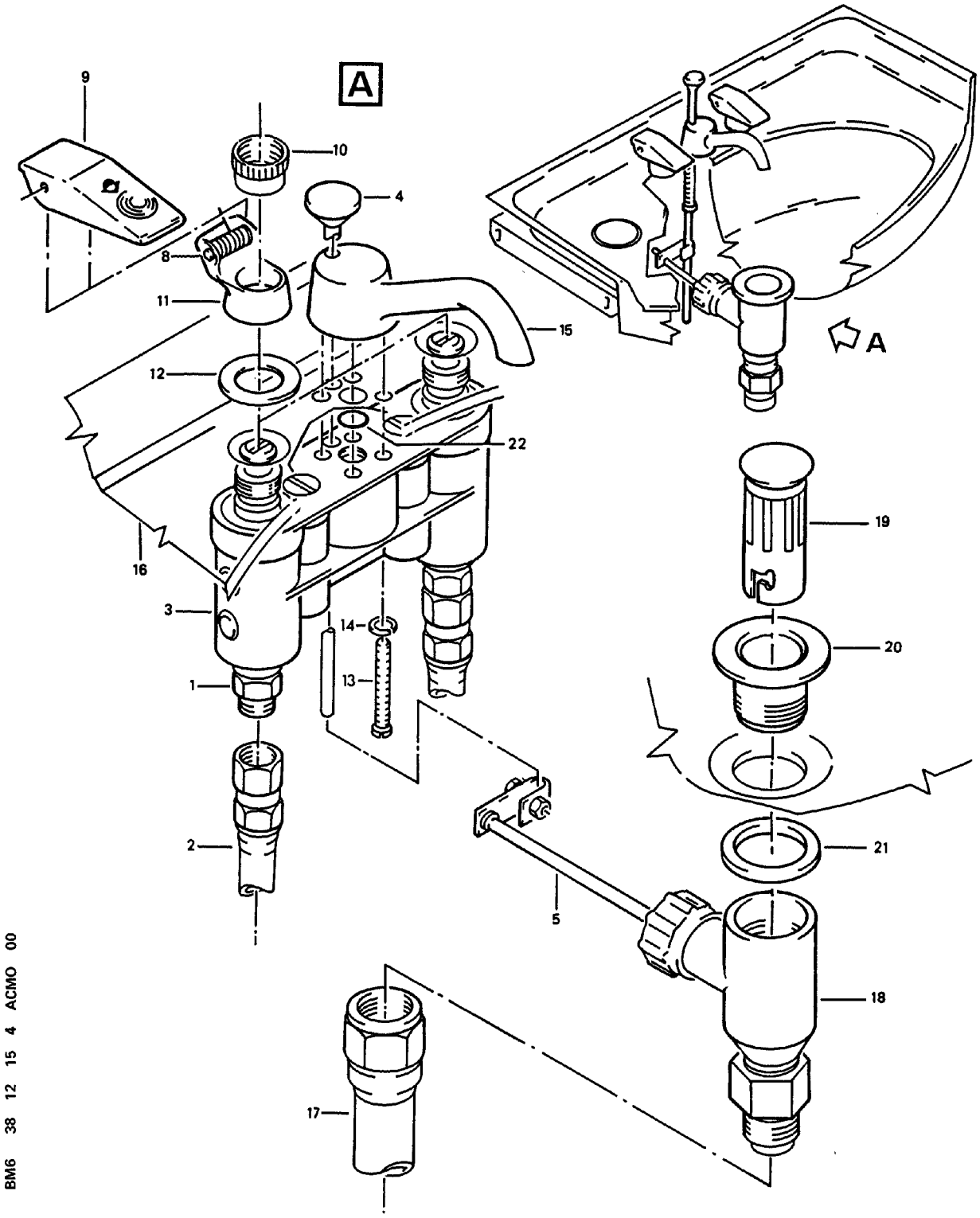
Referenced Procedures

- 38-10-00, P. Block 301	Sterilization of Potable Water System

3. Procedure

A. Job Set-Up
(1)Open sanitary unit cabinet door in appropriate lavatory; close shut-off valve (drain) and place water heater ON/OFF switch in OFF position.
(2)Open water faucets (hot and cold) and allow water to drain.

B. Removal
(Ref. Fig. 401)
(1)Remove washbasin faucet.
CAUTION : RESTRAIN FITTINGS (1) WHILE DETACHING THE GLAND NUTS OF HOSES (2).
(a)Disconnect hoses (2) at fittings (1).
(b)Release clamp located on rod (5).
(c)Remove pushrod (4).
(d)Depress spring-loaded pins (8) and remove levers (9).
(e)Remove nuts (10), hinges (11) and plates (12).
(f)Remove screws (13), lockwashers (14), bracket (23) and turret (15).
(g)Remove valve body (3). Discard O-ring (22).
(2)Remove sink drain valve.
(a)Disconnect hose (17).
(b)If applicable, release clamp located on rod (5).
(c)Rotate drain plug (19) counter clockwise and remove.
(d)Remove collar (20), valve (18) and gasket (21). Discard gasket.
(3)Remove drinking water fountain.
(Ref. Fig. 402)
(a)Remove screws (1), washers (2) and cover (3).
(b)Disconnect pipe (4).
(c)Remove screws (5), washers (6) and bracket (7) together with fountain (8).
(d)Remove nut (9) and fitting (10) to detach fountain (8) from bracket (7).



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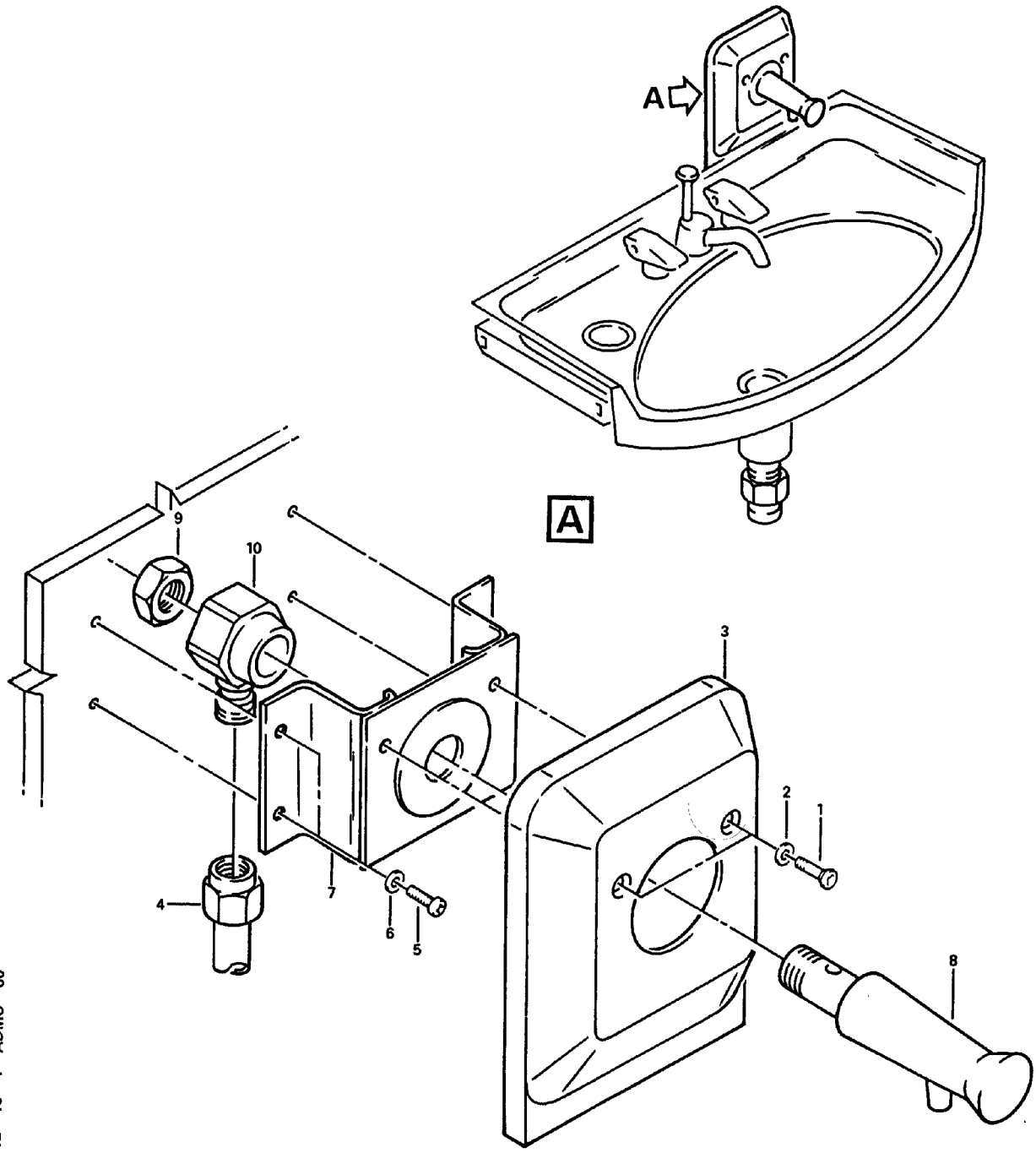
Washbasin Fixtures
Figure 401



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Drinking Water Fountain
Figure 402

C. Installation
(Ref. Fig. 401)
(1)Wrap sealing tape (Mat. No. 05-022) around the first four threads of fittings.
(2)Install washbasin faucet.
(a)Install new O-ring (22) and then position valve (3).
(b)Position turret (15), secure with lockwashers (14) and screws (13).
(c)Install plates (12) and hinges (11) and secure with nuts (10). TORQUE nuts to 0.28 m.daN (25 lbf. in.) max.
(d)Depress spring-loaded pins (8) and install levers (9).
(e)Position pushrod (4).
(f)Secure clamp of rod (5) to pushrod (4).
CAUTION : RESTRAIN FITTINGS (1) WHILE ATTACHING THE GLAND NUTS OF HOSES (2).
(g)Connect hoses (2). TORQUE hose fitting to 0.56 m.daN (50 lbf. in.) max.
(3)Install sink drain valve.
(a)Install new gasket (21) and position valve (18). Secure with collar (20).
(b)Install drain plug (19) and rotate clockwise until locked.
(c)Secure clamp of rod (5).
(d)Connect hose (17). TORQUE hose fitting to 0.6 m.daN (60 lbf. in.) max.
(4)Install drinking water fountain.
(Ref. Fig. 402)
(a)Install fountain (8) to bracket (7).
1 Install fitting (10) and rotate to pipe (4) direction.
2 Install nut (9).
(b)Position bracket (7) to bulkhead and install screws (5) and washers (6).
(c)Connect pipe (4) to fitting (10).
(d)Install cover (3), screws (1) and washers (2).

D. Adjustment
(Ref. Fig. 401)
(1)Adjust rod (5) so that pushrod (4) stroke is not more than 22.8 mm (0.90 in.) and drain plug (19) does not open more than 9.3 mm (0.37 in.).

E. Close-Up
R (1)Do the sterilization of the potable water system (Ref. 38-10-00, P. Block 301).
R (2)Open shut-off valve (drain) in sanitary unit cabinet.
R (3)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
R (4)Open manual shut-off valve, place water heater ON/OFF switch in ON position and close sanitary unit cabinet door of appropriate lavatory.

WASHBASIN FAUCET - REMOVAL/INSTALLATION

CAUTION : RESTRAIN FITTINGS WHILE DETACHING/ATTACHING THE GLAND NUTS OF HOSES.

1. Reason for the Job

A. Removal of the washbasin faucet

B. Removal of the sink drain valve

C. Adjustment of the sink drain operating mechanism

2. Equipment and Materials

ITEM	DESIGNATION
A.	Torque Wrench, up to 4.5 m.daN (33.18 lbf.ft.)
B.	Container
C.	O-rings
D.	Lock washers
E.	Gasket
F. Material NO. 04-012	Common Grease (Ref. 20-31-00)
G. Material No. 05-022	Special Materials (Ref. 20-31-00)
H. Material NO. 11-006	Cleaning Agents (Ref. 20-31-00)
Referenced Procedures	
- 12-15-38, P. Block 1	Replenishing Potable Water
R - 38-10-00, P. Block 301	Sterilziation of Potable Water System
- 38-40-00, P. Block 301	Air Supply

3. Procedure

A. Job Set-Up for lavatory A, T, W, Y and Z
(1)Open sanitary unit cabinet door in the appropriate lavatory.
(2)Close water shutoff valve and place water heater ON/OFF switch in OFF position.
(3)Open water faucets (hot and cold).
(4)Open sink drain valve to drain the water from the sink.
(5)Put container under washbasin to collect leak water.

B. Job Set-Up for lavatory X
(1)Open sanitary unit cabinet door in the lavatory.
(2)Place water heater ON/OFF switch in OFF position.
(3)Open access panel to water shutoff valve and close shutoff valve.
(4)Open water faucet (turn it to hot and cold).
(5)Open sink drain valve to drain the water from the sink.
(6)Put container under washbasin to collect leak water.

C. Removal

(1)Remove washbasin faucet in lavatory A, T, W, Y and Z (Ref. Fig. 401).

CAUTION : RESTRAIN FITTINGS (1) WHILE DETACHING GLAND NUTS OF HOSES (2).

(a)Disconnet hoses (2) at fittings (1).
(b)Release clamp located on rod (5).
(c)Remove pushrod (4).
(d)Depress spring-loaded pins (8) and remove levers (9).
(e)Remove nuts (10), hinges (11) and plates (12).
(f)Remove screws (13), lockwashers (14) and turret (15). Discard lockwashers (14).

(2)Remove washbasin faucet in lavatory X (Ref. Fig. 402).

CAUTION : RESTRAIN FITTINGS (7) WHILE DETACHING GLAND NUTS OF HOSES (9).

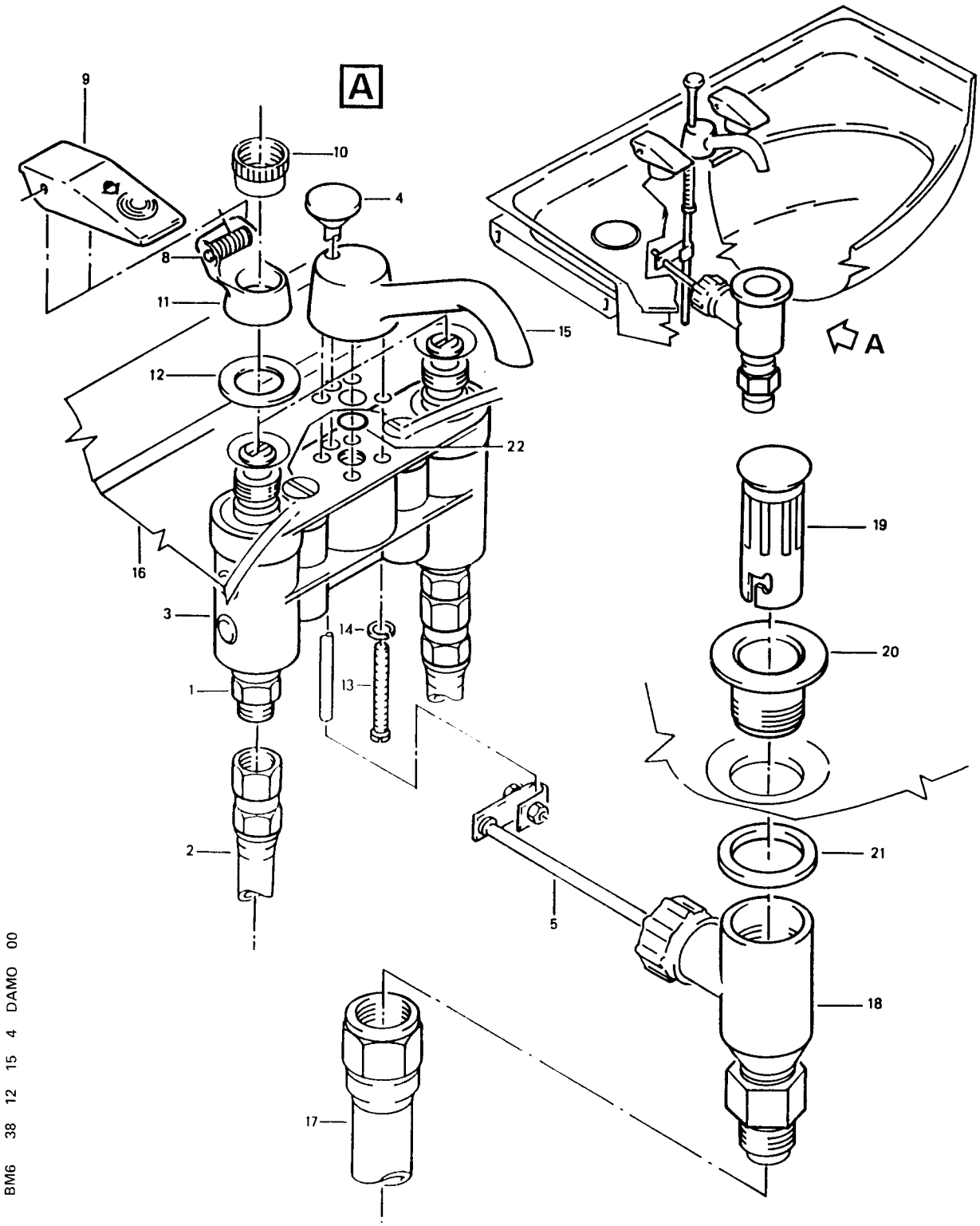
(a)Remove screw (1)and bracket (16).
(b)Carefully lift mirror (2) out of its anchor brackets and remove it from the lavatory.
(c)Remove bolts (5) and washers (4).
(d)Lift shroud (3) away from the wall.
(e)Remove nuts (11), washers (12) and faucet (15).
(f)Remove O-rings (14) and spring clips (13). Discard O-rings (14).
(g)Disconnet hoses (9) at fittings (7).
(h)Loosen nuts (6) and remove fittings (7) together with hoses (10).

(3)Remove sink drain valve in lavatory A, T, W, Y and Z (Ref. Fig. 401).

(a)Disconnect hose (17) from valve (18).
(b)Rotate drain plug (19) counter clockwise and remove it.
(c)Remove collar (20), valve (18) and gasket (21). Discard gasket (21).

(4)Remove sink drain valve in lavatory X (Ref. Fig. 403).

(a)Remove screw (2) and bracket (1).
(b)Carefully lift mirror (3) out of its anchor brackets and remove it from the lavatory.
(c)Remove bolts (6) and washers (5).
(d)Lift shroud (4) away from the wall.
(e)Remove grubscrew (11) and remove operating handle (10).
(f)Remove and discard O-ring (9).
(g)Remove screws (7).
(h)Remove and discard lock washers (8).
(j)Remove plate assembly (12).
(k)Remove clamps (21) and (22) and disconnect hoses (20) and (23).
(l)Pull plug (14) off actuating rod (18).
(m)Remove nut (16) and collar (24).
(n)Remove valve body (19) from the washbasin.
(p)Remove and discard O-rings (13) and (15).



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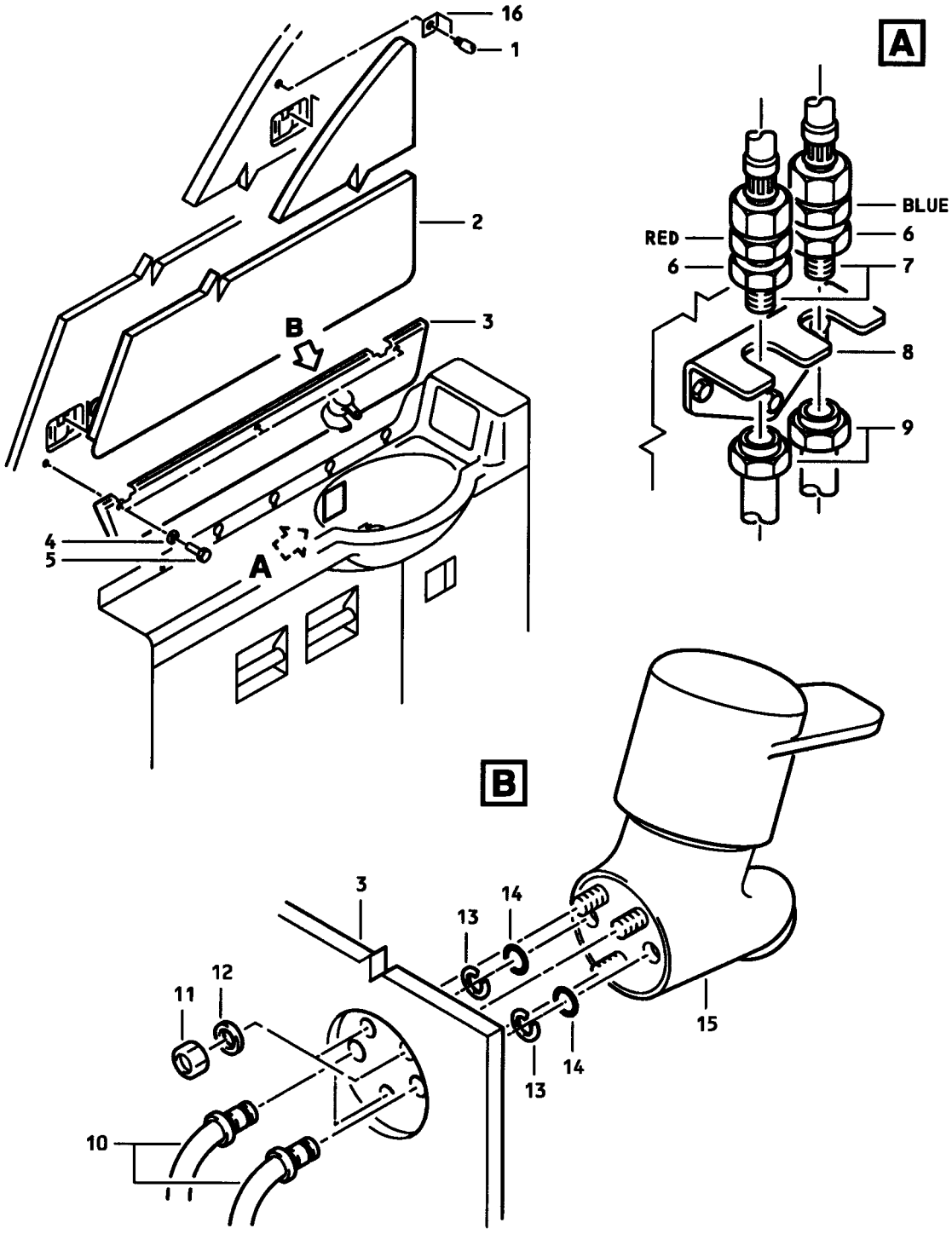
Washbasin Fixtures
Figure 401



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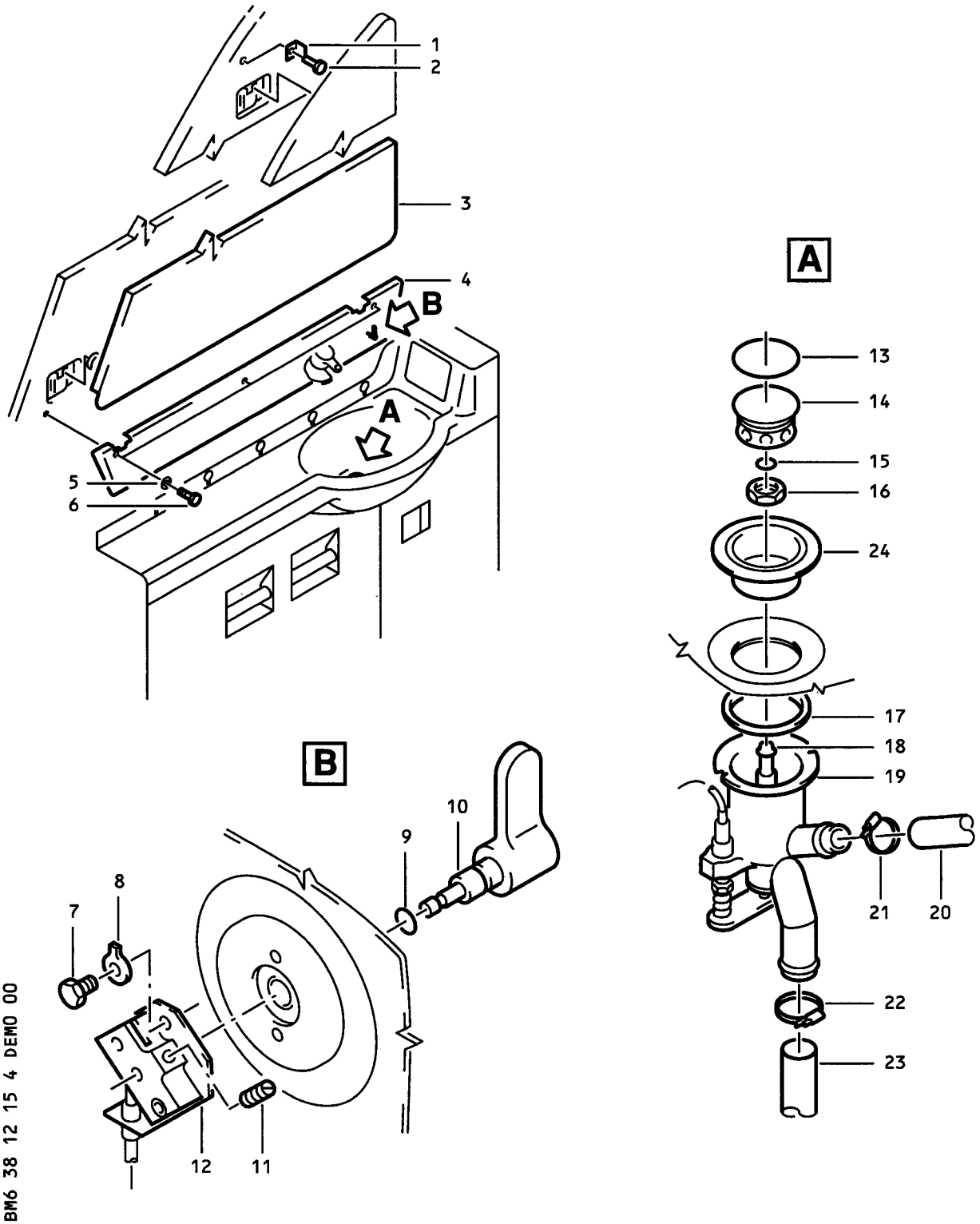
Washbasin Faucet
Figure 402



Washbasin Sink Drain Valve
Figure 403

D. Installation

(1)Install sink drain valve in lavatory A, T, W, Y and Z (Ref. Fig. 401).

(a)Clean component interface and adjacent area with CLEANING AGENTS (Material No. 11-006).

(b)Apply COMMON GREASE (Material No. 04-012) to new gasket (21).

(c)Install a new gasket (21) and put valve (18) in position. Secure it with collar (20).

(d)Install drain plug (19) and rotate it clockwise until locked.

(e)Connect hose (17) to valve (18).

(f)TORQUE hose fitting to 0.6 m.daN (60 lbf. in.) max.

(2)Install sink drain valve in lavatory X (Ref. Fig. 403).

(a)Clean component interface and adjacent area with CLEANING AGENTS (Material No. 11-006).

(b)Apply COMMON GREASE (Material No. 04-012) to all new O-rings.

(c)Install a new O-ring (36) and put valve body (19) in position.

(d)Put collar (24) in position and install nut (16).

(e)TORQUE nut (16) to 4.5 m.daN (33.18 lbf.ft).

(f)Connect hoses (20) and (23) to valve body (19).

(g)Install clamps (21) and (22).

(h)Install new lock washers (8) to screws (7).

(j)Put plate assembly (12) in position.

(k)Install screws (7) and safety them with lock washers (8).

(l)Install a new O-ring (9) on the shaft of operating handle (10).

(m)Put operating handle (10) in position and install grubscrew (11).

(n)Install new O-rings (13) and (15) to plug (14).

(p)Install plug (14) on actuating rod (18).

(q)Put shroud (4) in position.

(r)Install bolts (6) and washers (5).

(s)Put mirror (3) in position on its anchor brackets.

(t)Install bracket (1) and screw (2).

(3)Install washbasin faucet in lavatory A, T, W, Y and Z (Ref. Fig. 401).

(a)Clean component interface and adjacent area with CLEANING AGENTS (Material No. 11-006).

(b)Apply COMMON GREASE (Material No. 04-012) to new O-ring (22).

(c)Wrap sealing tape (Mat. No. 05-022) around the first four threads of fittings (1).

(d)Install a new O-ring (22) to valve (3).

(e)Put valve (3) in position.

(f)Put turret (15) in position.

(g)Install screws (13) and new lock washers (14).

(h)Put plates (12) and hinges (11) in position.

(j)Install nuts (10).

(k)TORQUE nuts to 0.28 m.daN (25 lbf. in.) max.

(l)Depress spring-loaded pins (8) and install levers (9).

(m)Put pushrod (4) in position.

(n)Secure the clamp of rod (5) to pushrod (4).

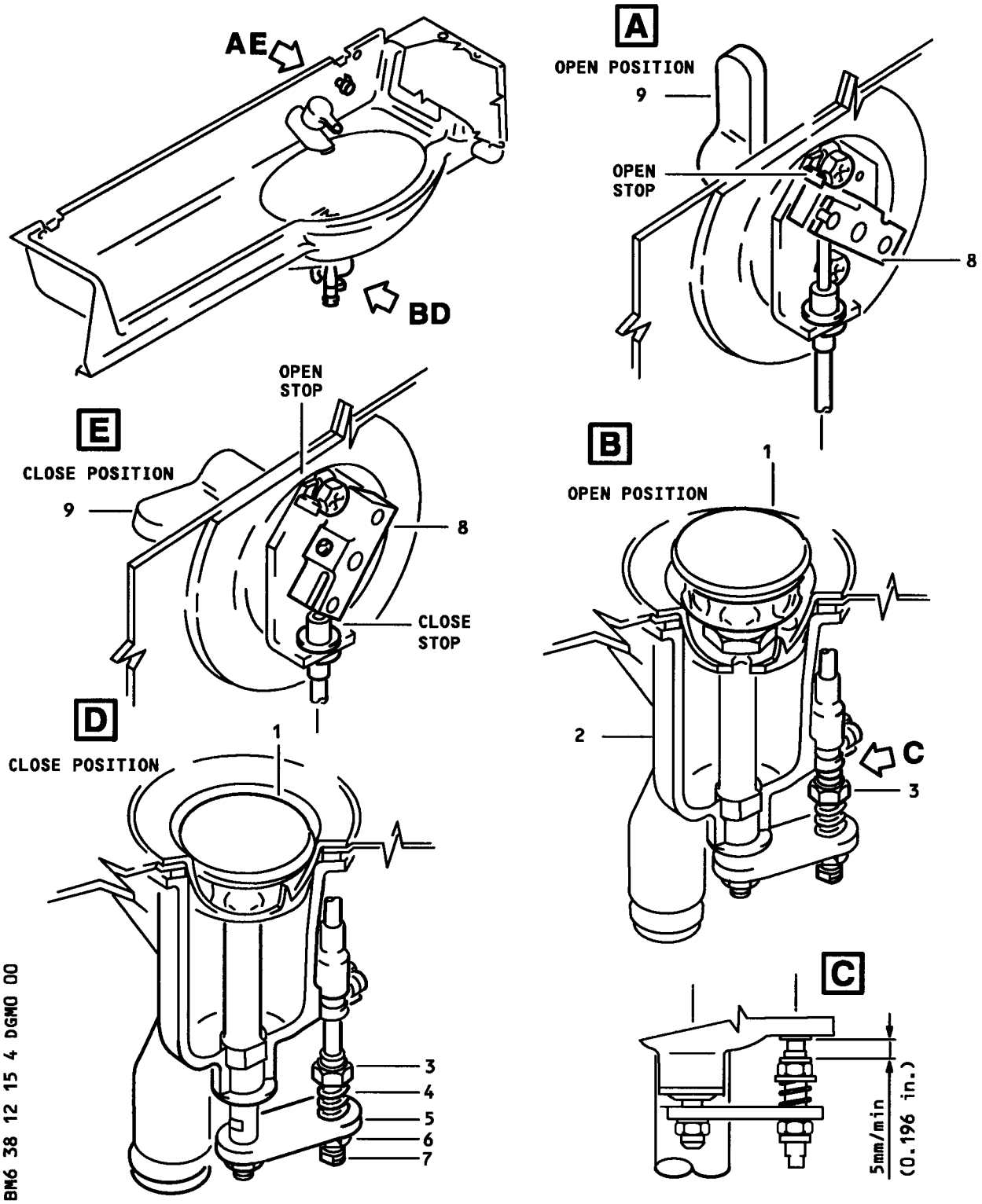
CAUTION : RESTRAIN FITTINGS (1) WHILE ATTACHING GLAND NUTS OF HOSES (2).

(p)Connect hoses (2) to fittings (1).
(q)TORQUE the gland nuts of hoses (2) to 0.56 m.daN (50 lbf. in.) max.

(4)Install washbasin faucet in lavatory X (Ref. Fig. 402).
(a)Clean component interface and adjacent area with CLEANING AGENTS (Material No. 11-006).
(b)Apply COMMON GREASE (Material No. 04-012) to new O-rings (14).
(c)Wrap sealing tape (Mat. No. 05-022) around the first four threads of fittings (7).
(d)Put fittings (7) together with hoses (10) in position on bracket (8).
(e)Tighten nuts (6).
(f)Put hoses (10) in position through shroud (3) and secure them with spring clips (13).
(g)Install new O-rings (14).
(h)Put faucet (15) in position on shroud (3).
(j)Install washers (12) and nuts (11).
CAUTION : RESTRAIN FITTINGS (7) WHILE ATTACHING GLAND NUTS OF HOSES (9).
(k)Connect hoses (9) to fittings (7).
(l)Put shroud (3) in position.
(m)Install bolts (5) and washers (4).
(n)Put mirror (4) in position on its anchor brackets.
(p)Install bracket (16) and screw (1).

E. Adjustment
(1)Adjustment of sink drain operating mechanism in lavatory A, T, W, Y and Z (Ref. Fig. 401).
(a)Adjust rod (5) so that pushrod (4) stroke is not more than 22.8 mm (0.90 in.) and drain plug (19) does not open more than 9.3 mm (0.37 in.).
(2)Adjustment of sink drain control cable in lavatory X (Ref. Fig. 404).
(a)Put operating handle (9) in the open position.
(b)Adjust nut (3) to get a maximum clearance of 5 mm (0.1968 in.) between nut (3) and valve body (2).
(c)Put operating handle (48) in the close position.
(d)Make sure that lever (8) contacts the close stop.
(e)Loosen nut (6) to release the tension from spring (4).
(f)Make sure that plug (1) is closed.
(g)Adjust nut (6) until there is no clearance between nut (6) and lever (5).
(h)Make sure that spring (4) is not under tension.
(j)Operate operating handle (9) and make sure that the system operates smoothly.

F. Leak Check
(1)If necessary replenish potable water system (Ref. 12-15-38, P. Block 1).
(2)Pressurize potable water system (Ref. 38-40-00, P. Block 301).
(3)Open water shutoff valve.
(4)Open water faucet until water flows into washbasin.
(5)Examine all fittings, faucet and sink drain valve for leaks.



Control Cable Adjustment
Figure 404

NOTE : Leaks are not permitted.

(6)Open sink drain valve and make sure the water drains overboard.

(7)Depressurize potable water system (Ref. 38-40-00, P. Block 301).

G. Close-Up for lavatory A, T, W, Y and Z

R (1)Do the sterilization of the potable water system (Ref. 38-10-00, P. Block 301).

R (2)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

R (3)Remove container under washbasin.

R (4)Place water heater ON/OFF switch in the ON position.

R (5)Close sanitary unit cabinet door of the appropriate lavatory.

H. Close-Up for lavatory X

R (1)Do the sterilization of the potable water system (Ref. 38-10-00, P. Block 301).

R (2)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

R (3)Remove container under washbasin.

R (4)Place water heater ON/OFF switch in the ON position.

R (5)Close sanitary unit cabinet door of the lavatory.

R (6)Close access panel to water shutoff valve.

WATER HEATER - REMOVAL/INSTALLATION

CAUTION : ALLOW WATER HEATER TO COOL BEFORE REMOVING.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps
B.	One Container - Capacity 2 l (0.53 US gal.)
C.	Circuit Breaker Safety Clips and Tags
D.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
E. Material No. 05-022	Special Materials (Ref. 20-31-00)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 24-41-00, P. Block 301	AC External Power Control
R - 38-10-00, P. Block 301	Potable Water System
- 38-40-00, P. Block 301	Air Supply

2. Procedure

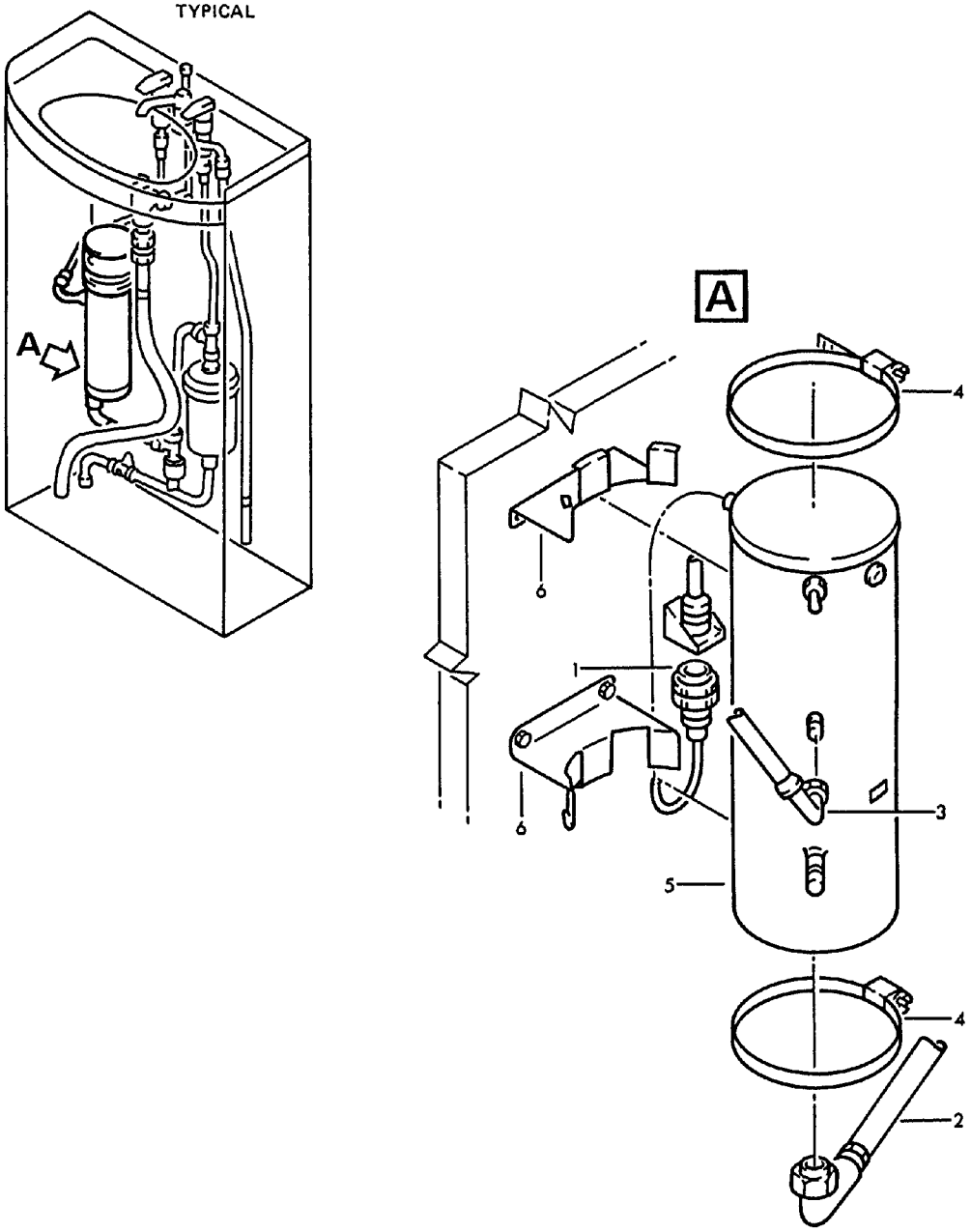
A. Job Set-Up
(1)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(2)Make certain that electronics racks ventilation is correct.
(3)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	LAVATORY FWD & MID/HOT WATER	1MB	G 7
800VU	LAVATORY FWD & MID/HOT WATER	23MB	G 8
811VU	LAVATORY AFT/HOT WATER	11MB	B 4
811VU	LAVATORY AFT/HOT WATER	13MB	B 5

(4)Open sanitary unit cabinet door in appropriate lavatory.
(5)Close manual shutoff valve and switch off water heater.
(6)Open water faucets (hot and cold) to relieve pressure.

CAUTION : ALLOW WATER HEATER TO COOL BEFORE REMOVING.

B. Removal
(Ref. Fig. 401)
(1)Disconnect electrical connector (1).
(2)Place container under water heater (5).
(3)Disconnect inlet line (2) and outlet line (3).
NOTE : Collect leaking water in container.
(4)Remove water heater (5) from brackets (6) by removing clamps (4).
(5)Install caps on electrical connector, water heater and hoses.
(6)Remove container.



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Water Heater
Figure 401

C. Preparation for Installation
(Ref. Fig. 401)
(1)Remove blanking caps from water heater (5) and wrap sealing tape (Mat. No. 05-022) around thread of inlet and outlet fitting.

D. Installation
(Ref. Fig. 401)
(1)Position water heater (5) on brackets (6) and secure with clamps (4).
NOTE : Do not tighten clamps at this stage.
(2)Remove blanking caps and connect inlet line (2) and outlet line (3).
(3)Remove blanking cap and connect electrical connector (1).
(4)Tighten clamps (4).

E. Test
(1)Replenish potable water system (Ref. 12-15-38, P. Block 1).
(2)Pressurize potable water system (Ref. 38-40-00, P. Block 301).
(3)Open manual shutoff valve slowly.
(4)Check line connections for leakage.
NOTE : Leakage is not permissible.
(5)Remove safety clips and tags and close circuit breakers 1MB, 23MB, 11MB and 13MB.
(6)Switch on water heater.
(7)After 10 minutes, open hot water faucet and check that water is tepid.

F. Close-Up
R (1)Do the sterilization of the potable water system (Ref. 38-10-00, P. Block 301).
R (2)De-energize the aircraft electrical network and disconnect electrical power unit (Ref. 24-41-00, P. Block 301).
R (3)Switch off water heater and close sanitary unit cabinet door.
R (4)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

WATER HEATER - REMOVAL/INSTALLATION

CAUTION : ALLOW THE WATER HEATER TO COOL BEFORE REMOVING.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps
B.	One Container - Capacity 2 l (0.53 US gal.)
C.	Circuit Breaker Safety Clips and Tags
D.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
E. Material No. 05-022	Special Materials (Ref. 20-31-00)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 24-41-00, P. Block 301	AC External Power Control
R - 38-10-00, P. Block 301	Potable Water System
- 38-40-00, P. Block 301	Air Supply

2. Procedure

A. Job Set-Up for lavatory A, T, W, Y and Z
(1)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(2)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	LAVATORY FWD & MID/HOT WATER	1MB	G 7
800VU	LAVATORY FWD & MID/HOT WATER	42MB	G 8
811VU	LAVATORY AFT/HOT WATER	11MB	B 4
811VU	LAVATORY AFT/HOT WATER	13MB	B 5

(3)Open sanitary unit cabinet door in the appropriate lavatory.
(4)Close water shutoff valve.
(5)Switch off water heater.
(6)Open water faucets (hot and cold) to relieve water pressure.
(7)Place container under water heater.

B. Job Set-Up for lavatory X
(1)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(2)Open, safety and tag the following circuit breakers:

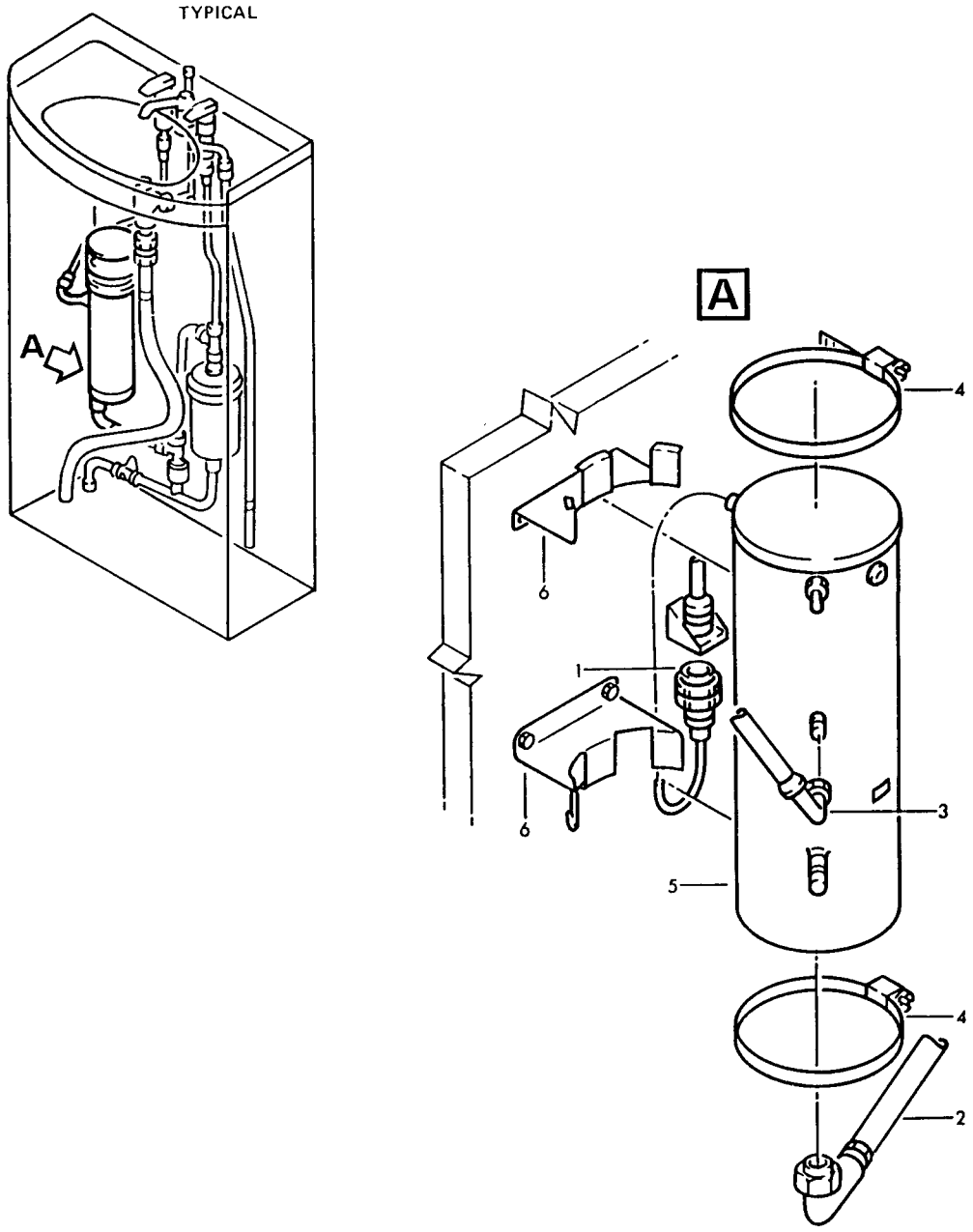
PANEL	SERVICE	IDENT.	LOCATION
811VU	LAVATORY AFT/HOT WATER	11MB	B 4
811VU	LAVATORY AFT/HOT WATER	13MB	B 5

(3)Open sanitary unit cabinet door in the lavatory.
(4)Switch off water heater.
(5)Open access panel to water shutoff valve.
(6)Close water shutoff valve.
(7)Open water faucet (turn to hot and cold) to relieve water pressure.
(8)Place container under water heater.

C. Removal
(1)Removal of water heater from lavatory A, T, W, Y and Z (Ref. Fig. 401)
(a)Disconnect electrical connector (1).
(b)Disconnect inlet line (2) and outlet line (3).
NOTE : Collect the leaking water in the container.
(c)Remove water heater (5) from brackets (6) by removing clamps (4).
(d)Install blanking caps on electrical connector (1), water heater (5), inlet line (2) and outlet line (3).
(2)Removal of water heater from lavatory X (Ref. Fig. 402)
(a)Disconnect electrical connector (1).
(b)Disconnect inlet line (2) and outlet line (3).
NOTE : Collect the leaking water in the container.
(c)Remove nut (7) to disconnect bonding strap (8).
(d)Remove water heater (5) from brackets (6) by removing clamps (4).
(e)Install blanking caps on electrical connector (1), water heater (5), inlet line (2) and outlet line (3).

D. Preparation for Installation
(1)Remove all blanking caps from water heater.
(2)Wrap sealing tape (Mat. No. 05-022) around thread of inlet and outlet fitting.

E. Installation
(1)Installation of water heater for lavatory A, T, W, y and Z (Ref. Fig. 401)
(a)Put water heater (5) in position on brackets (6)
(b)Install clamps (4).
NOTE : Do not tighten the clamps at this stage.
(c)Remove blanking caps from inlet line (2) and outlet line (3).
(d)Connect inlet line (2) and outlet line (3).
(e)Remove blanking cap from electrical connector (1).
(f)Connect electrical connector (1).
(g)Tighten clamps (4).
(2)Installation of water heater for lavatory X (Ref. Fig. 402)
(a)Put water heater (5) in position on brackets (6)
(b)Install clamps (4).
NOTE : Do not tighten the clamps at this stage.
(c)Remove blanking caps from inlet line (2) and outlet line (3).
(d)Connect inlet line (2) and outlet line (3).
(e)Remove blanking cap from electrical connector (1).



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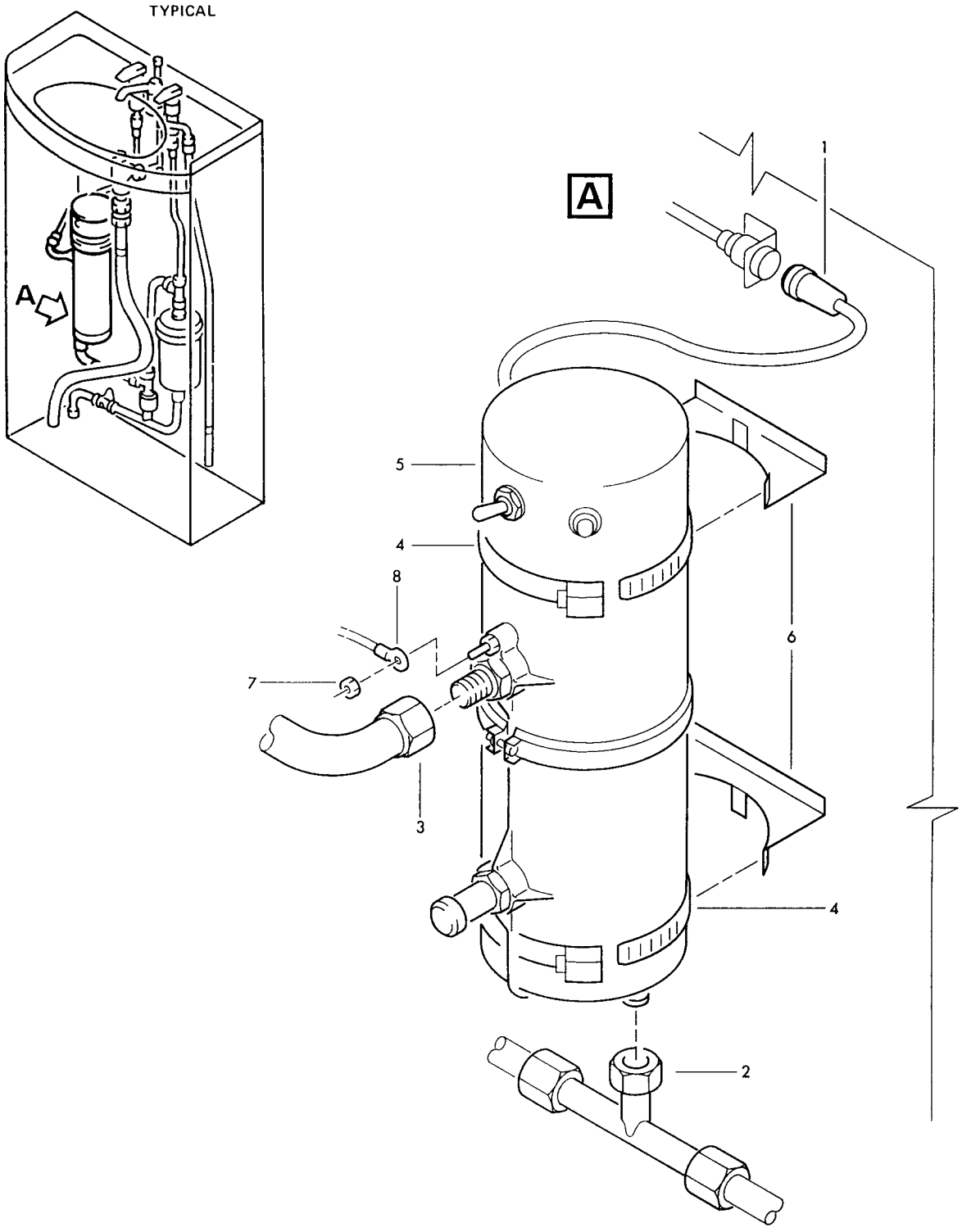
Water Heater
Figure 401



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Water Heater
Figure 402

(f)Connect electrical connector (1).
(g)Connect bonding strap (8) and install nut (7).
(h)Tighten clamps (4).

E. Test
(1)If necessary replenish potable water system (Ref. 12-15-38, P. Block 1).
(2)Pressurize potable water system (Ref. 38-40-00, P. Block 301).
(3)Open water shutoff valve.
(4)Open water faucet until water flows into washbasin.
(5)Examine all connections for leaks.
NOTE : Leaks are not permitted.
(6)Remove safety clips and tags and close circuit breakers 1MB, 42MB, 11MB and 13MB.
(7)Switch on water heater.
(8)After 10 minutes, open hot water faucet and check that water is tepid.

F. Close-Up for lavatory A, T, W, Y and Z
R (1)Do the sterilization of the potable water system (Ref. 38-10-00, P. Block 301).
R (2)Remove container under water heater.
R (3)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
R (4)Close sanitary unit cabinet door in appropriate lavatory.
R (5)De-energize aircraft electrical network and disconnect electrical power unit (Ref. 24-41-00, P. Block 301).

G. Close-Up for lavatory X
R (1)Do the sterilization of the potable water system (Ref. 38-10-00, P. Block 301).
R (2)Remove container under water heater.
R (3)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
R (4)Close sanitary unit cabinet door in lavatory.
R (5)Close access panel to water shutoff valve.
R (6)De-energize aircraft electrical network and disconnect electrical power unit (Ref. 24-41-00, P. Block 301).

NON-RETURN VALVE (381590) - SUPPLY LINE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps and Plugs
B. Material No. 05-022	Special Materials (Ref. 20-31-00)
Referenced Procedures	
- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
R - 38-10-00, P. Block 301	Potable Water System
- 38-40-00, P. Block 301	Air Supply

2. Procedure

A. Job Set-Up
(1)Drain potable water system (Ref. 12-24-38, P. Block 1).
(2)Remove access door 136AR.

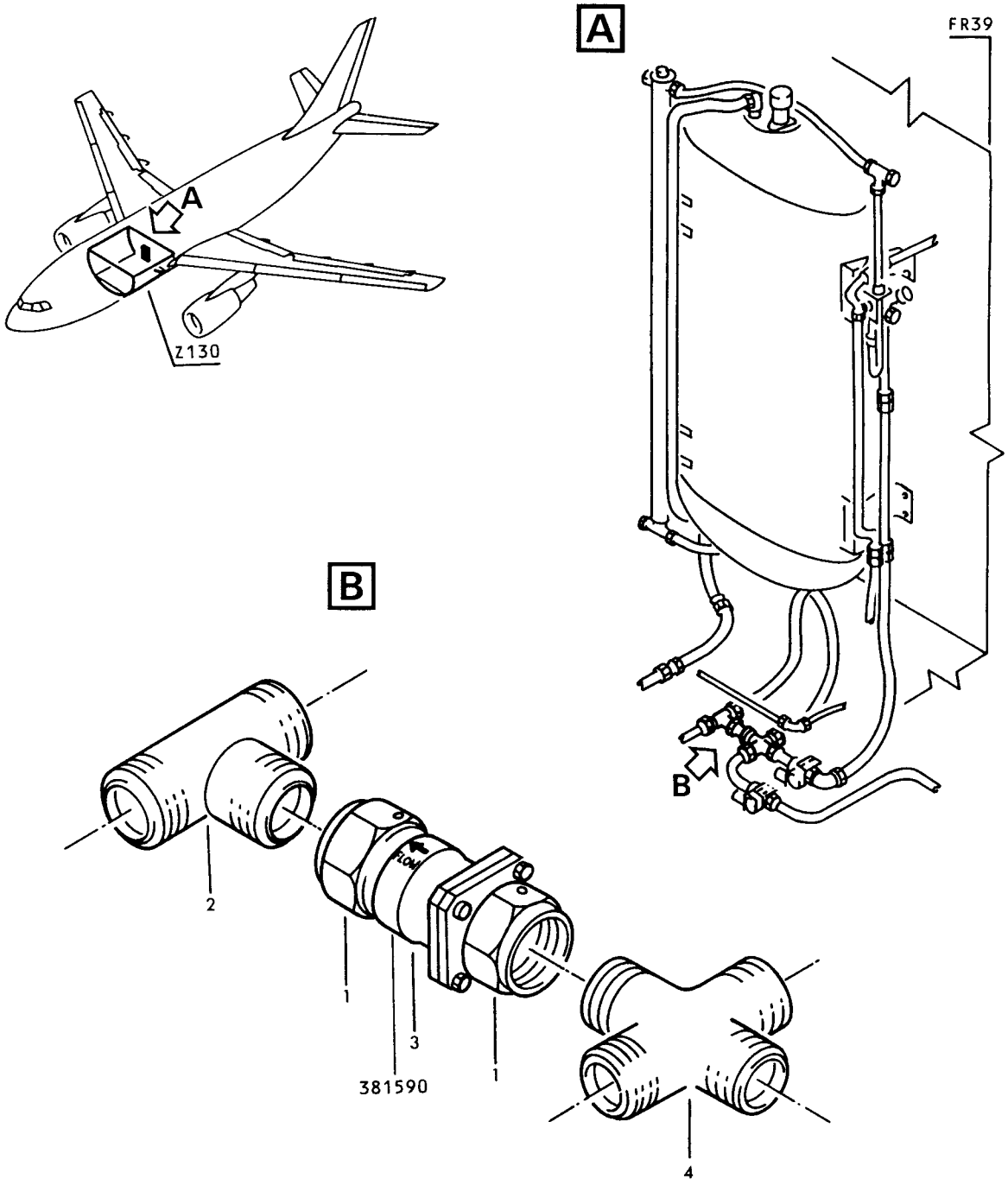
B. Removal (Ref. Fig. 401)
(1)Disconnect unions (1).
(2)Remove non-return valve (3) (381590).
(3)Install blanking caps and plugs to all openings.

C. Preparation for Installation (Ref. Fig. 401)
(1)Remove old sealing tape from fittings (2, 4).
(2)Wrap sealing tape (Mat. No. 05-022) around threads of fittings (2, 4).
(3)Make certain that non-return valve (3) (381590) is clean and no external damage is visible.
(4)Remove all blanking caps and plugs from openings.

D. Installation (Ref. Fig. 401)
(1)Put non-return valve (3) (381590) in position between fittings (2) and (4).
NOTE : Make sure that the flow arrow points towards fitting (2).
(2)Connect unions (1).

E. Test
(1)Replenish potable water system (Ref. 12-15-38, P. Block 1) and pressurize water system (Ref. 38-40-00, P. Block 301).
(2)Check all connections for leakage.
NOTE : Leakage is not permissible.

F. Close-Up
R (1)Do the sterilization of the potable water system (Ref. 38-10-00, P. Block 301).
R (2)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
R (3)Install access door 136AR.



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Non-Return Valve - Supply Line
Figure 401

1. General

The purpose of the quantity indication system is to show at any time the amount of potable water available in the storage tanks to the ground service or cabin personnel.

2. Component Location

R **ON A/C 101-200,

(Ref. Fig. 001)

R **ON A/C 001-100,

(Ref. Fig. 002)

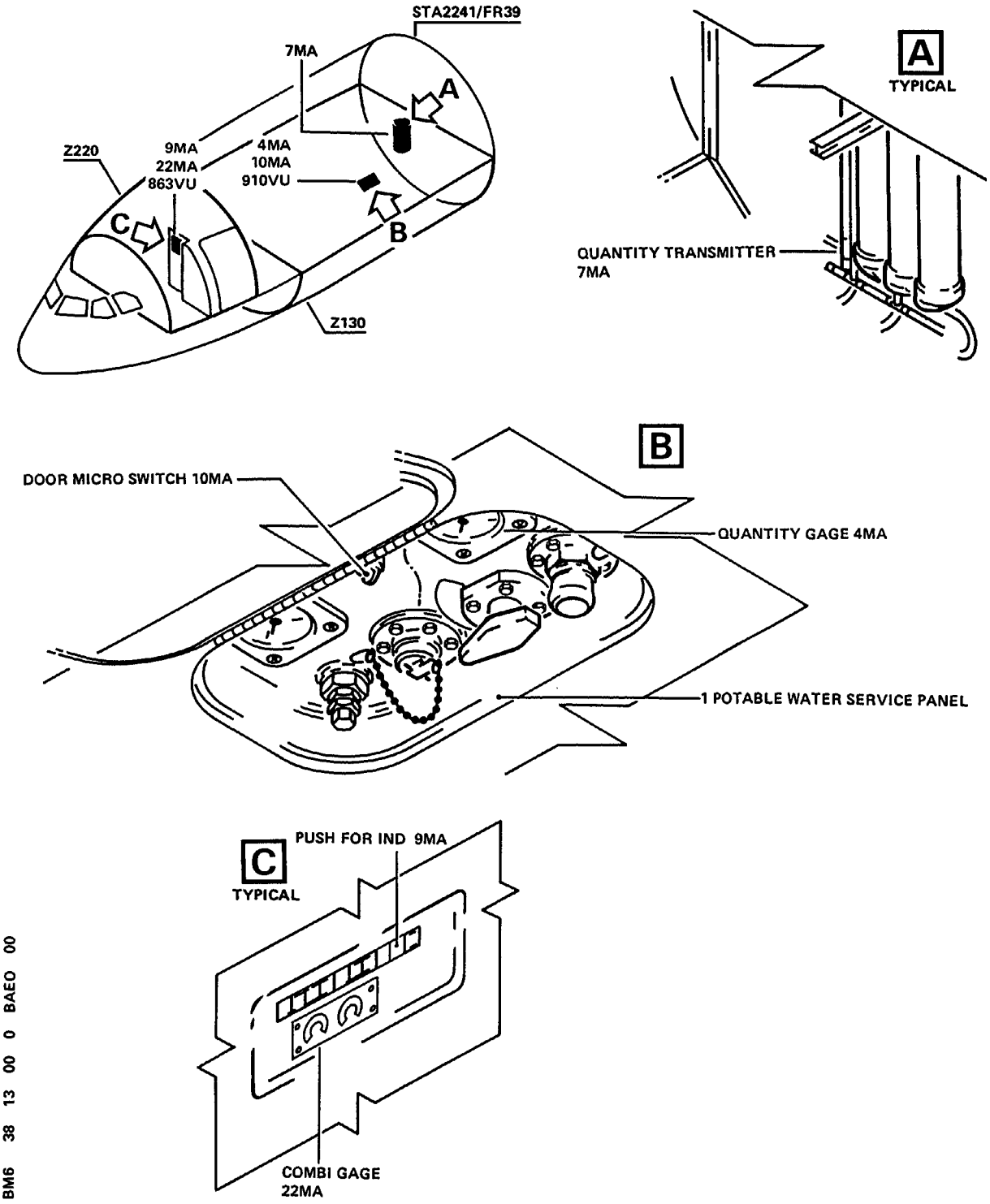
R **ON A/C 101-200,

	FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
R	4MA	QUANTITY GAGE	910VU	136	136BR	38-13-12
	7MA	TRANSMITTER-WATER QUANTITY		138		38-13-11
	9MA	PUSHBUTTON-PUSH FOR IND	863VU	221		
R	10MA	SWITCH-DOOR MICRO	910VU	136	136BR	38-42-13
	22MA	GAGE-COMBI	863VU	221		38-13-12
R	1	PANEL-POTABLE WATER SERVICE		136	136BR	

R **ON A/C 001-100,

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
7MA	TRANSMITTER-WATER QUANTITY		138		38-13-11
9MA	PUSHBUTTON-PUSH FOR IND	863VU	221		
10MA	SWITCH-DOOR MICRO	910VU	136	136BR	38-42-13
15MA	UNIT-PRESELECTION CONTROL		138		38-13-14
16MA	SWITCH-PRESELECTION	863VU	221		38-13-14
17MA	LIGHT-TANK FULL INDICATION	910VU	136	136BR	
22MA	GAGE-COMBI	863VU	221		38-13-12
1	PANEL-POTABLE WATER SERVICE		136	136BR	

R **ON A/C ALL



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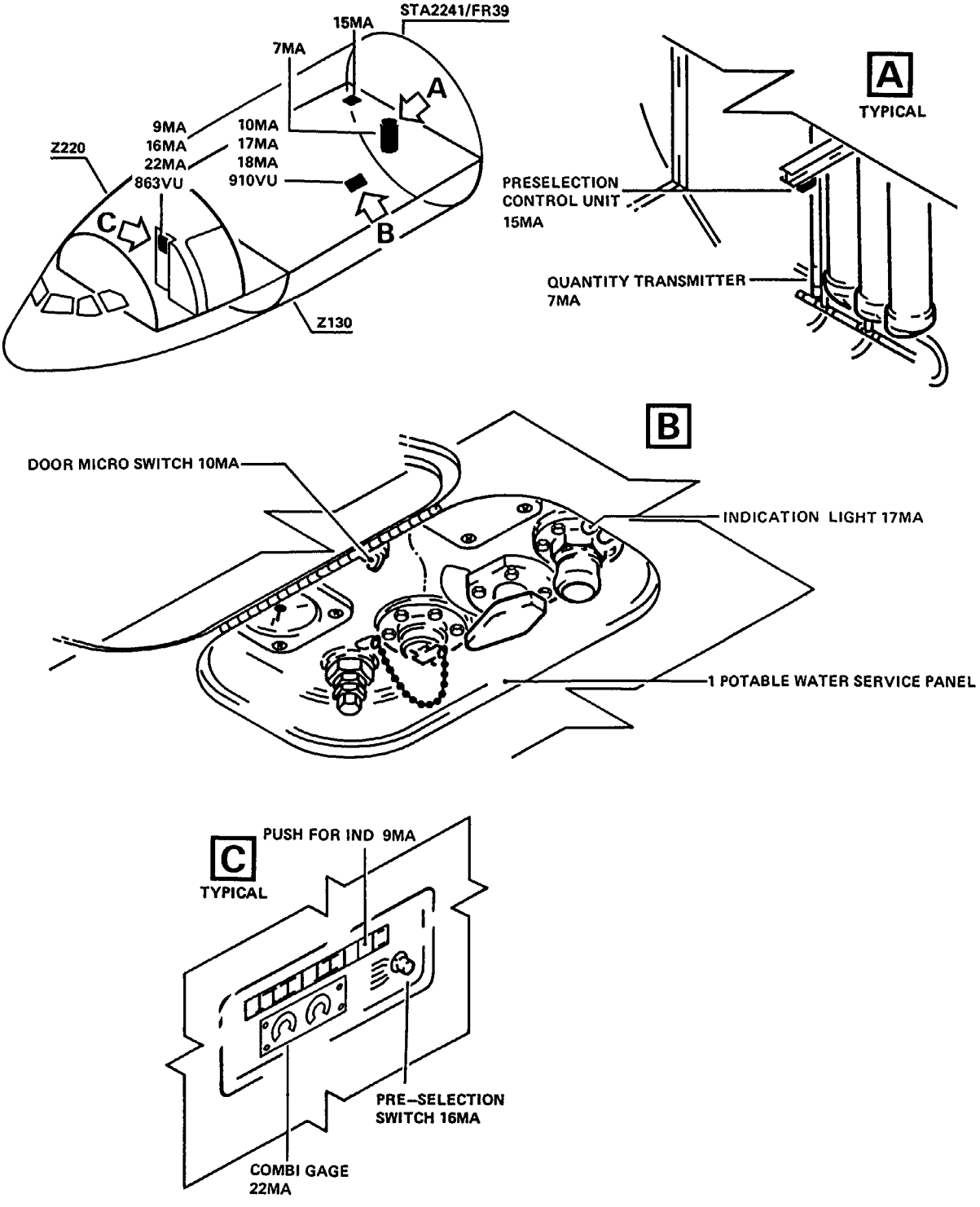
R Component Location
Figure 001



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Component Location
Figure 002

3. Description

R **ON A/C 101-200,

The amount of water contained in the storage tank system is displayed by combi gage (22MA) at purser's panel (863VU) and quantity gage (4MA) at the potable water service panel. Both gages operate in parallel, receiving an electr. signal from quantity transmitter (7MA) mounted in a cylindrical housing attached to the main water tank.
Two independant switches control the power function for the indicating system, microswitch (10MA) located at the potable water service panel and pushbutton PUSH FOR IND (9MA) at the purser's panel (863VU).
The system is powered and protected via circuit breaker (1MA).

R **ON A/C 001-100,

The transmitter (7MA) is installed in the system to measure the quantity of water in the potable water tanks. The transmitter is mounted in a cylindrical housing, which, in turn, is connected to the water tanks.
The combi gage (22MA) on purser's panel (863VU) and the indication light TANK FULL (17MA) on potable water service panel are connected electrically to the transmitter (7MA) via the preselection control unit (15MA). Door microswitch (10MA), installed on the potable water service panel, connects the electrical power supply to the quantity indicating system when potable water service panel access door (136BR) is open. The quantity of water required in the tanks is selected in percentage at preselection switch (16MA) on purser panel (863VU). A pushbutton PUSH FOR IND (9MA) is installed on the purser's panel (863VU) and connects, when potable water service panel access door (136BR) is closed, the electrical power supply to the quantity indicating system when pressed.
The system is powered and protected via circuit breaker (1MA).

R **ON A/C ALL

4. Operation

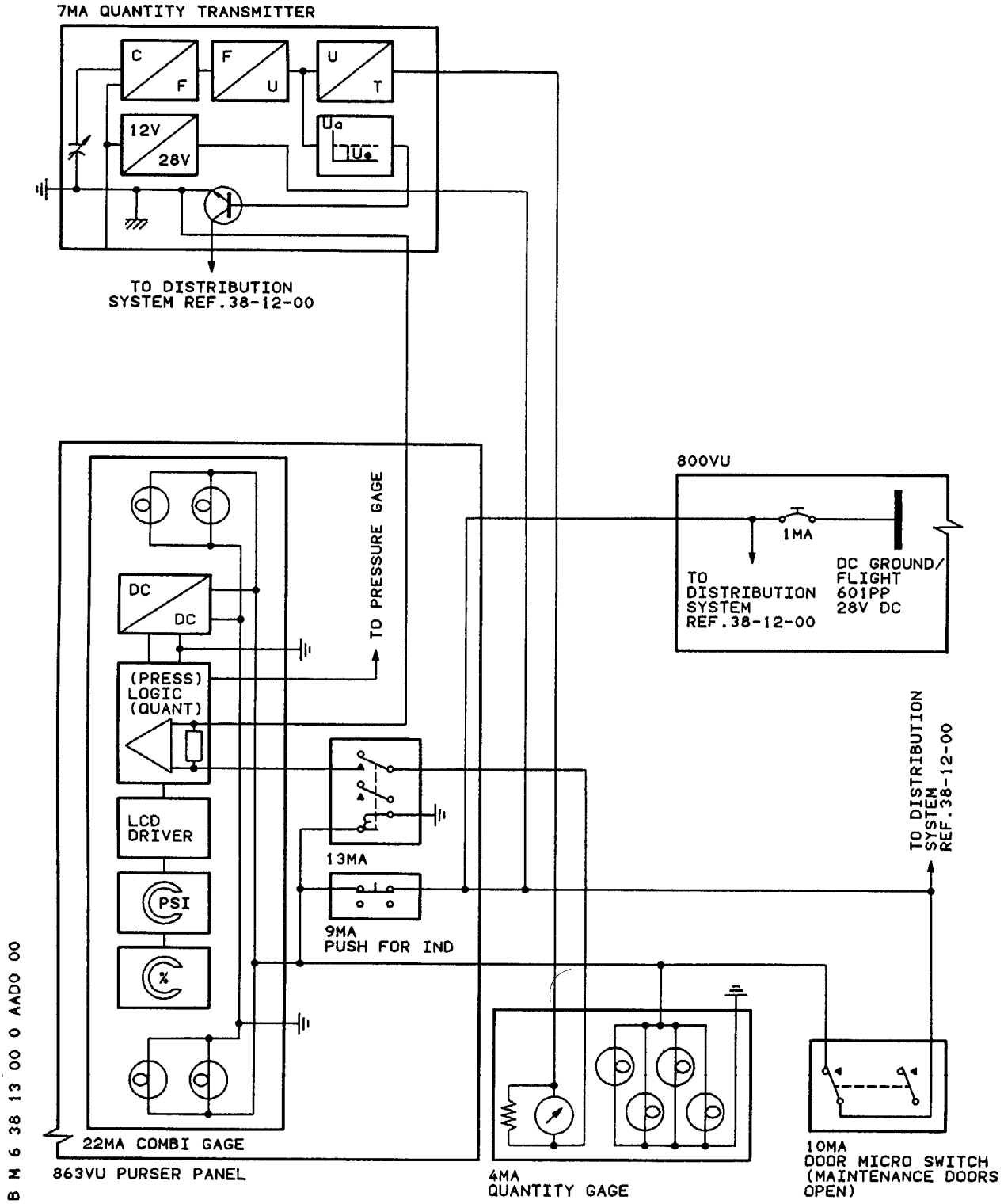
R **ON A/C 101-200,

(Ref. Fig. 003)

R **ON A/C 001-100,

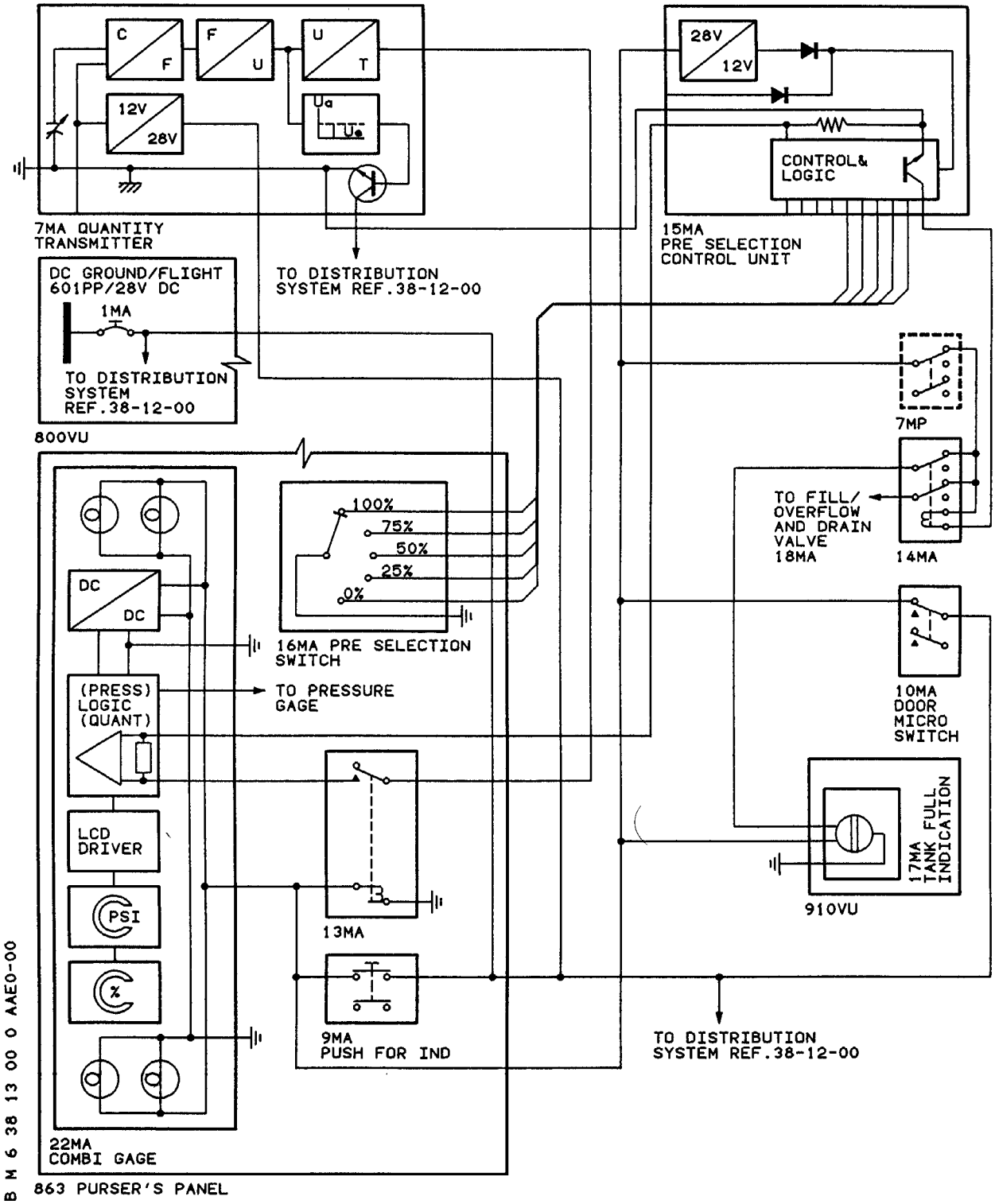
(Ref. Fig. 004)

R **ON A/C 101-200,



Electrical Schematic
Figure 003

R



Electrical Schematic
Figure 004

Transmitter (7MA) measures the water quantity by capacitance. This measurement is in direct relationship to the change of water level, which causes a change of current flow. The resulting signal is indicated on combi gage (22MA) and quantity gage (4MA).
On ground microswitch (10MA) is actuated by opening the potable water service panel access door (136BR) and provides electr. power for illumination and indication of the combi gage (22MA) and the quantity gage (4MA) simultaneously.
Closing the door isolates the electr. power to both gages.
In flight, electr. power for illumination and indication of the combi gage (22MA) is controlled and operated at pushbutton PUSH FOR IND (9MA) when pressed.

R **ON A/C 001-100,

Transmitter (7MA) measures the water quantity by capacitance. This measurement is in direct relationship to the change of water level, which causes a change of current flow. The output signal is indicated on combi gage (22MA). The preselection control unit (15MA), located in Zone 138, is electrically connected to the water quantity transmitter (7MA), preselection switch (16MA), electrical fill/overflow and drain valve (18MA) and the indication light (17MA). The preselection control unit (15MA) receives a current signal corresponding to the quantity selected by the preselection switch (16MA) on purser's panel (863VU) and compares this with the current signal transmitted by the water quantity transmitter (7MA). When the signal from the quantity transmitter (7MA) equals the signal from the preselection switch (16MA), a current signal is given by the preselection control unit (15MA) to the actuator of the electrical fill/overflow and drain valve (18MA) to shut off the valve.
Simultaneously, a current signal is given by the preselection control unit (15MA) to the indication light (17MA), which then comes on, indicating end of filling procedure.
The combi gage (22MA) is powered via circuit breaker (1MA) when microswitch (10MA) is actuated by opening the potable water service panel access door (136BR) or when the pushbutton PUSH FOR IND (9MA) on purser's panel (863VU) is pressed.

1. Functional Test of System

A. Equipment and Materials

ITEM	DESIGNATION
(1)	Circuit Breaker Safety Clip and Tag
(2)	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control

B. Procedure

(1)Job Set-Up

(a)Connect electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).

(b)Make certain that electronics racks ventilation is correct.

(c)Drain the potable water system (Ref. 12-24-38, P. Block 1).

(d)Make certain that the following circuit breaker is closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H 5

(e)Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H 2

R **ON A/C 101-200,

(2)Test

ACTION	RESULT
1. On potable water service panel: - Open potable water service panel access door (136BR).	On potable water service panel: - Dial light in quantity gage (4MA) comes on. - Quantity gage (4MA) indicates an empty tank. On purser's panel (863VU): - Background lighting in combi gage (22MA) comes on and indicates an empty tank.

ACTION	RESULT
2. On potable water service panel: - Fill potable water system (Ref. 12-15-38, P. Block 1).	On potable water service panel: - Dial light in quantity gage (4MA) is on. - Quantity gage (4MA) indicates actual water quantity. On purser's panel (863VU): - Background lighting in combi gage (22MA) is on and indicates actual water quantity.
3. On potable water service panel: - Press and hold microswitch (10MA). NOTE : This action simulates closed position of potable water service panel access door (136BR).	On potable water service panel: - Dial light in quantity gage (4MA) goes off. - Quantity gage (4MA) indicates an empty tank. On purser's panel (863VU): - Background lighting in combi gage (22MA) goes off.
4. On purser's panel (863VU): - Press and hold pushbutton PUSH FOR IND (9MA).	On purser's panel (863VU): - Background lighting in combi gage (22MA) comes on. - Combi gage (22MA) indicates actual water quantity. On potable water service panel: - Dial light in quantity gage (4MA) comes on. - Quantity gage (4MA) indicates actual water quantity.
5. On purser's panel (863VU): - Release pushbutton PUSH FOR IND (9MA).	On purser's panel (863VU): - Background lighting in combi gage (22MA) goes off. On potable water service panel: - Dial light in quantity gage (4MA) goes off. - Quantity gage (4MA) indicates an empty tank.
6. On potable water service panel: - Release microswitch (10MA).	On potable water service panel: - Dial light in quantity gage (4MA) comes on. - Quantity gage (4MA) indicates actual water quantity. On purser's panel (863VU): - Background lighting in combi gage (22MA) comes on and indicates actual water quantity.
7. On potable water service panel: - Close potable water service panel access door (136BR).	

R **ON A/C 001-100,

(2)Test

ACTION	RESULT
1. On potable water service panel: - Open potable water service panel access door (136BR).	On potable water service panel: - TANK FULL indication light (17MA) is off. On purser's panel (863VU): - Background lighting in combi gage (22MA) comes on and indicates an empty tank.
2. On purser's panel (863VU): - Place preselection switch (16MA) to 25 % position.	
3. On potable water service panel: - Fill potable water system (Ref. 12-15-38, P. Block 1).	On potable water service panel: - When selected water quantity is reached the fill/overflow and drain valve (18MA) closes automatically and TANK FULL indication light (17MA) comes on. On purser's panel (863VU): - Background lighting in combi gage (22MA) is on and indicates selected water quantity.
4. On purser's panel (863VU) and on potable water service panel: - Repeat steps 2. and 3. with preselection switch (16MA) in positions 50 %, 75 % and 100 %.	On potable water service panel: - By placing the preselection switch (16MA) on the next position, the TANK FULL indication light (17MA) goes off. When the new selected water quantity is reached, the fill/overflow and drain valve (18MA) closes automatically and TANK FULL indication light (17MA) comes on again. On purser's panel (863VU): - Background lighting in combi gage (22MA) is on and indicates at each position the selected water quantity.
5. On potable water service panel: - Press and hold microswitch (10MA). NOTE : This action simulates closed position of potable water service panel access door (136BR).	On potable water service panel: - TANK FULL indication light (17MA) goes off. On purser's panel (863VU): - Background lighting in combi gage (22MA) goes off.

ACTION	RESULT
6. On purser's panel (863VU): - Press and hold pushbutton PUSH FOR IND (9MA).	On purser's panel (863VU): - Background lighting in combi gage (22MA) comes on and indicates selected water quantity. On potable water service panel: - TANK FULL indication light (17MA) comes on.
7. On purser's panel (863VU): - Release pushbutton PUSH FOR IND (9MA).	On purser's panel (863VU): - Background lighting in combi gage (22MA) goes off. On potable water service panel: - TANK FULL indication light (17MA) goes off.
8. On potable water service panel: - Release microswitch (10MA).	On potable water service panel: - TANK FULL indication light (17MA) comes on. On purser's panel (863VU): - Background lighting in combi gage (22MA) comes on and indicates selected water quantity.
9. On potable water service panel: - Close potable water service panel access door (136BR).	

R **ON A/C ALL

(3)Close-Up
(a)De-energize the aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).
(b)Remove safety clip and tag, and close circuit breaker 19MD.
(c)Wipe dry service panel and adjacent area.
(d)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

WATER QUANTITY TRANSMITTER - REMOVAL/INSTALLATION

CAUTION : THE WATER QUANTITY TRANSMITTER IS FRAGILE:
- DO NOT BEND OR USE EXCESSIVE FORCE,
- HANDLE WITH CARE AND AVOID JARRING OR SHOCK.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.30 m (7.50 ft.)
B.	Torque Wrench, up to 0.25 m.daN (22 lbf.in.)
C.	Blanking Caps
D.	Circuit Breaker Safety Clip and Tag

Referenced Procedures

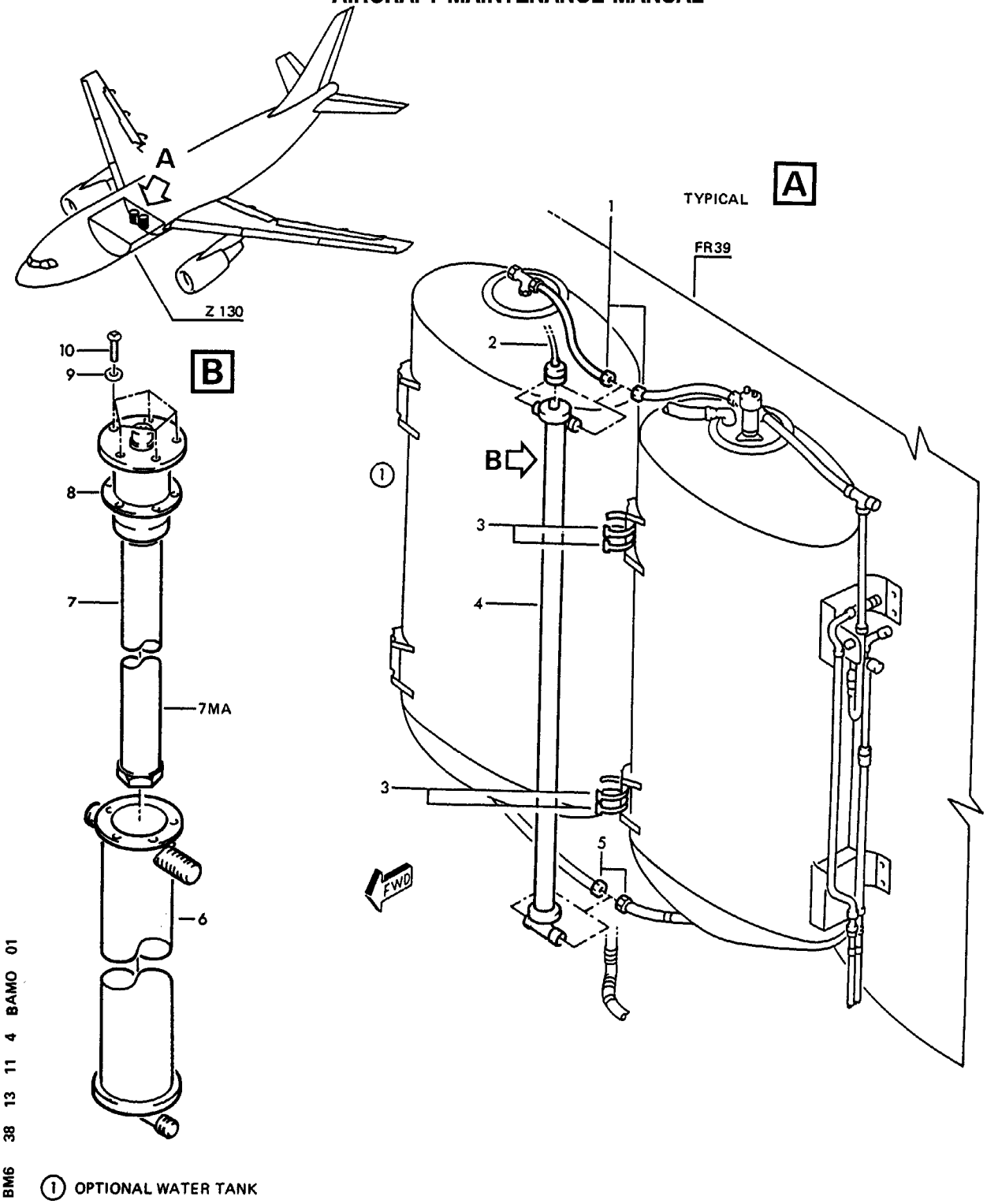
- 12-24-38, P. Block 1	Potable Water System - Draining
R - 38-10-00, P. Block 301	Potable Water System
- 38-13-00, P. Block 501	Quantity Indication
- 38-40-00, P. Block 301	Air Supply
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
- 53-10-55, P. Block 401	FWD Cargo Compartment Fixed Partition

2. Procedure

A. Job Set-Up
(1)Position access platform under FWD cargo compartment door (Z811).
(2)Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-00, P. Block 301).
(3)Remove FWD cargo compartment fixed partition (132SW) (Ref. 53-10-55, P. Block 401).
(4)Depressurize air supply system (Ref. 38-40-00, P. Block 301).
(5)Drain potable water system (Ref. 12-24-38, P. Block 001).
(6)Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5

B. Removal
(Ref. Fig. 401)
(1)Disconnect electrical connector (2).
(2)Disconnect upper and lower unions (1, 5). Install blanking caps.
(3)Release hose clamps (3) and remove quantity transmitter assembly (4).
(4)Remove screws (10) and washers (9).
(5)Carefully pull quantity transmitter (7MA) (7) out of hose (6).
(6)Remove and discard gasket (8).



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(1) OPTIONAL WATER TANK

R Water Quantity Transmitter (7MA)
Figure 401

C. Installation
(Ref. Fig. 401)
(1)Install a new gasket (8) on quantity transmitter (7MA) (7).
(2)Carefully push quantity transmitter (7MA) (7) into hose (6).
(3)Install screws (10) and washers (9) and torque screws (10) to 0.1 m.daN (8.85 lbf.in.).
(4)Install quantity transmitter assembly (4) with clamps (3).
(5)Remove blanking caps and connect upper and lower unions (1, 5) to quantity transmitter assembly (4).
(6)Connect electrical connector (2).

D. Test
(1)Carry out functional test of water quantity indication system (Ref. 38-13-00, P. Block 501).

E. Close-Up
R (1)Do the sterilization of the potable water system (Ref. 38-10-00,
R P. Block 301).
(2)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Install FWD cargo compartment fixed partition (132SW) (Ref. 53-10-55, P. Block 401).
(3)Remove safety lock (Ref. 52-30-00, P. Block 301) and close FWD cargo compartment door (Z811).
(4)Remove access platform.
(5)Remove safety clip and tag and close circuit breaker 1MA.

R **ON A/C 101-200,

R WARNING : USE EXTREME CARE WHEN WORKING WITH CLEANING AGENTS (MAT. NO. 11-003).
R MAKE CERTAIN THAT WORKING AREA IS WELL VENTILATED. AVOID INHALATION
R OF FUMES, MIST OR DUST. PROTECT EYES AND SKIN.
R APPLY MATERIALS IN ACCORDANCE WITH MANUFACTURE'S INSTRUCTIONS.
R FIRE PROTECTION REGULATIONS MUST BE OBSERVED.

R **ON A/C ALL

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps
B.	Circuit Breaker Safety Clips and Tags

R **ON A/C 101-200,

R C.	Access Platform 1 m (3.3 ft.)
R D. Material No. 09-002	Sealants (Ref. 20-31-00)
R E. Material No. 11-003	Cleaning Agents (Ref. 20-31-00)

R **ON A/C ALL

Referenced Procedure	
- 38-13-00, P. Block 501	Quantity Indicating

2. Procedure

A. Job Set-Up
(1)Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5

R **ON A/C 101-200,

R (2)Position access platform.
R (3)Open potable water service panel access door (136BR).
R (4)Remove access door (136AR).

R **ON A/C ALL

B. Removal
(1)Remove combi gage 22MA from purser's panel 863VU.

R **ON A/C 101-200,

R (Ref. Fig. 401)

R **ON A/C 001-100,

(Ref. Fig. 402)

R **ON A/C 101-200,

R (a)Open access panel (1) at FWD purser's station.
R (b)Remove screws (2) and tinted acrylic cover (3).
R NOTE : Tinted acrylic cover (3) is fragile.
R (c)Disconnect and cap electrical connector 22MA-A (4) from combi
R gage 22MA.
R (d)Remove nuts (7), washers (6) and bolts (5).
R (e)Remove combi gage 22MA (8) from purser's panel 863VU.

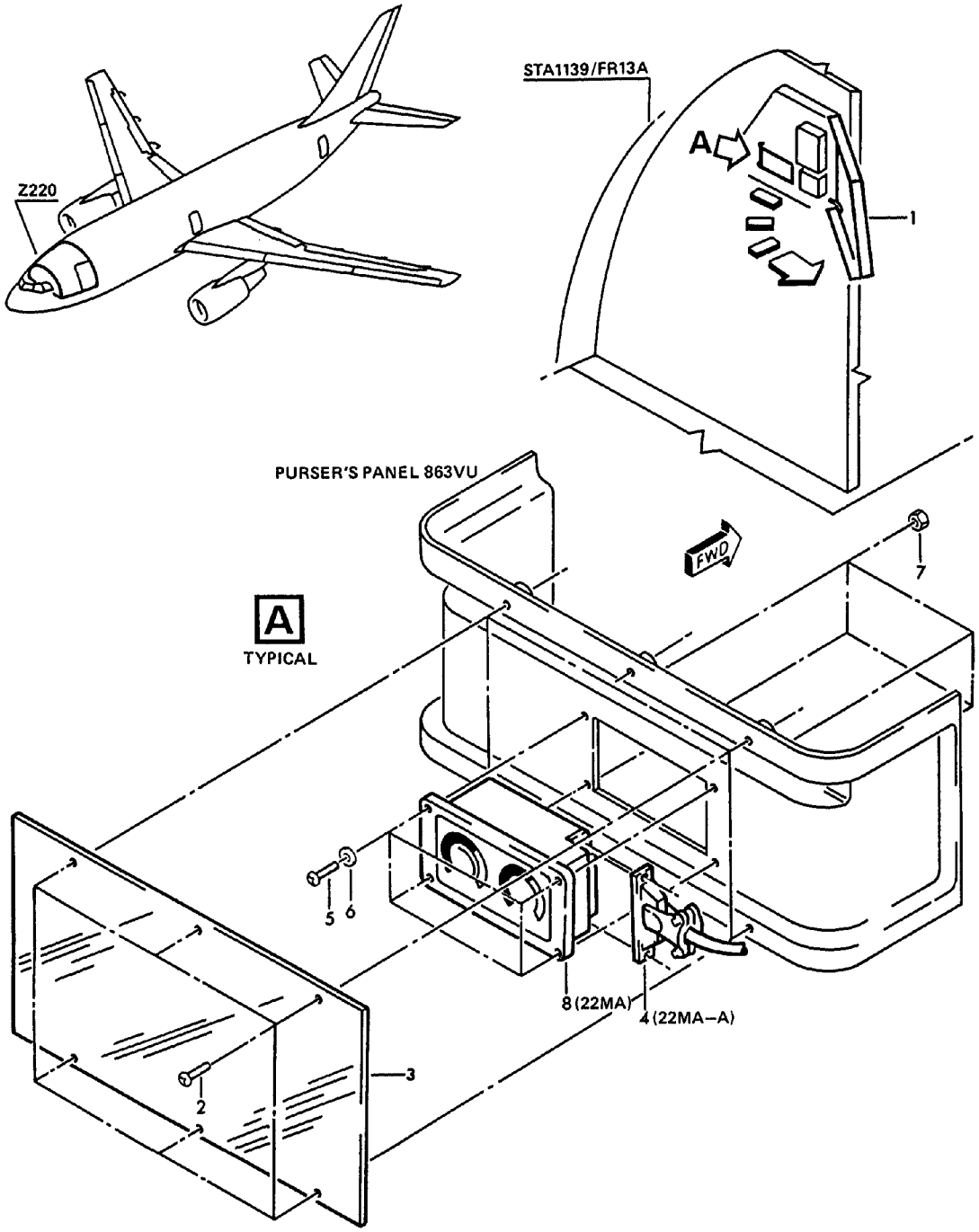
R **ON A/C 001-100,

(a)Open access panel (1) at FWD purser's station.
(b)Release set screw (10) and remove knob (9).
(c)Remove screws (2) and tinted acrylic cover (3).
NOTE : Tinted acrylic cover (3) is fragile.
(d)Disconnect and cap electrical connector 22MA-A (4) from combi
gage 22MA.
(e)Remove nuts (7), washers (6) and bolts (5).
(f)Remove combi gage 22MA (8) from purser's panel 863VU.

R **ON A/C 101-200,

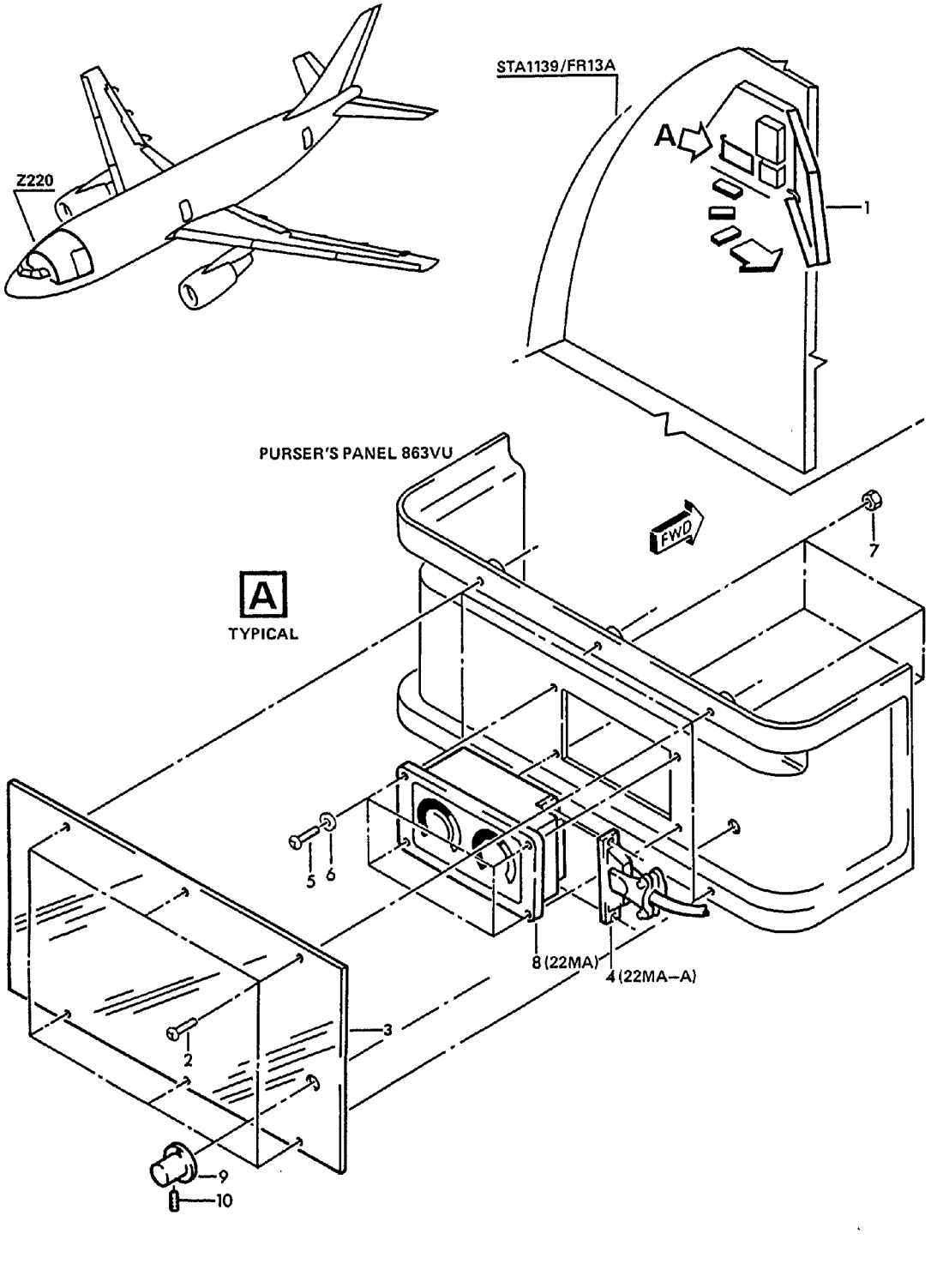
R (2)Remove quantity gage 4MA from potable water service panel 910VU.
R (Ref. Fig. 403)
R (a)Disconnect and cap electrical connector 4MA-A from quantity
R gage 4MA.
R (b)Remove nuts (2), washers (3) and bolts (4).
R (c)Remove flange (5) and seal (6).
R (d)Remove screw (7) and quantity gage 4MA (8) with clamp (9).
R WARNING : CLEANING AGENT (MAT. NO. 11-003) IS DANGEROUS.
R (e)Remove old sealant using cleaning agent (Mat. No. 11-003).

R **ON A/C ALL



BM6 38 13 12 4 BANO 00

Combi Gage 22MA
Figure 401



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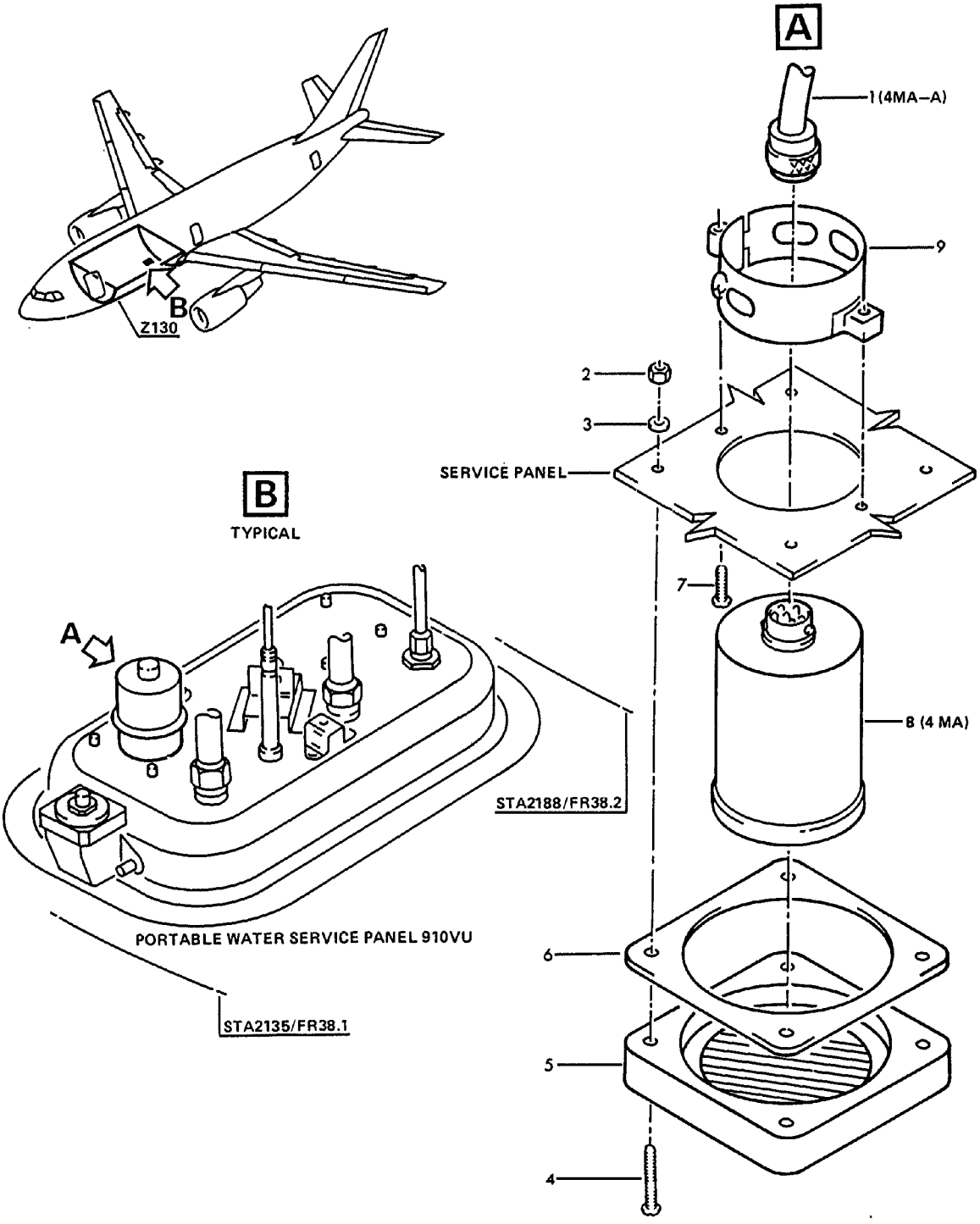
Combi Gage 22MA
Figure 402



BM6 38 13 12 4 BCMO 00

Quantity Gage 4MA
Figure 403

R

C. Installation
(1)Install quantity gage 22MA to purser's panel 863VU.

R **ON A/C 101-200,

R (Ref. Fig. 401)

R **ON A/C 001-100,

(Ref. Fig. 402)

R **ON A/C 101-200,

R (a)Position combi gage 22MA (8) and install washers (6), bolts (5)
R and nuts (7) to purser's panel 863VU.
R (b)Remove cap and connect electrical connector 22MA-A (4) to combi
R gage 22MA.
R (c)Install tinted acrylic cover (3) and tighten screws (2).
R NOTE : Tinted acrylic cover (3) is fragile.
R (d)Close access panel (1) at purser's station.

R **ON A/C 001-100,

(a)Position combi gage 22MA (8) and install washers (6), bolts (5)
and nuts (7) to purser's panel 863VU.
(b)Remove cap and connect electrical connector 22MA-A (4) to combi
gage 22MA.
(c)Install tinted acrylic cover (3) and tighten screws (2).
NOTE : Tinted acrylic cover (3) is fragile.
(d)Install knob (9) and secure with set screw (10).
(e)Close access panel (1) at purser's station.

R **ON A/C 101-200,

R (2)Install quantity gage 4MA to potable water service panel 910VU.
R (Ref. Fig. 403)
R (a)Apply sealant (Mat. No. 09-002) to quantity gage 4MA.
R (b)Position quantity gage 4MA (8) with clamp (9) and install
R screws (7).
R (c)Position new seal (6) and flange (5).
R 1 Install bolts (4), washers (3) and nuts (2) to potable
R water service panel 910VU.
R (d)Remove cap and connect electrical connector 4MA-A (1).

R **ON A/C ALL

D. Test
(1)Carry out functional test of quantity indicating system
(Ref. 38-13-00, P. Block 501).

E. Close-Up
(1)Remove safety clip and tag and close circuit breaker 1MA.
(2)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

R **ON A/C 101-200,

R (2)Close service panel (136BR) and access panel (136AR).
R (3)Remove access platform.

WATER QUANTITY PRESELECTION - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, up to 2.3 m (7.5 ft.)
B.	Ty-wraps
C.	Blanking Caps
D.	Circuit Breaker Safety Clip and Tag
Referenced Procedures	
- 20-28-11, P. Block 1	Electrical Bonding
- 25-54-10, P. Block 201	FWD Cargo Compartment Linings
- 38-13-00, P. Block 501	Quantity Indication
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors

2. Procedure

A. Job Set-Up

(1)Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5

(1)Position access platform under FWD cargo compartment door (Z811).

(2)Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-00, P. Block 301).

(3)Remove FWD cargo compartment ceiling panel (132GC) (Ref. 25-54-10, P. Block 201).

B. Removal

(Ref. Fig. 401)

(Ref. Fig. 402)

(1)Preselection Control Unit (15MA)

(a)Disconnect and cap electrical connector (5).

(b)Remove nuts (1), washers (2) and bolts (3). Disconnect bonding strap (6).

(c)Remove preselection control unit (4) (15MA).

(2)Preselection Switch (16MA)

(a)Open access panel (1) at fwd purser station.

(b)Release setscrew (2) and remove knob (3).

NOTE : The smoke detector selector knob must also be removed, if fitted.

(c)Remove bolts (4) and tinted acrylic cover (5).

NOTE : Tinted acrylic cover is fragile.

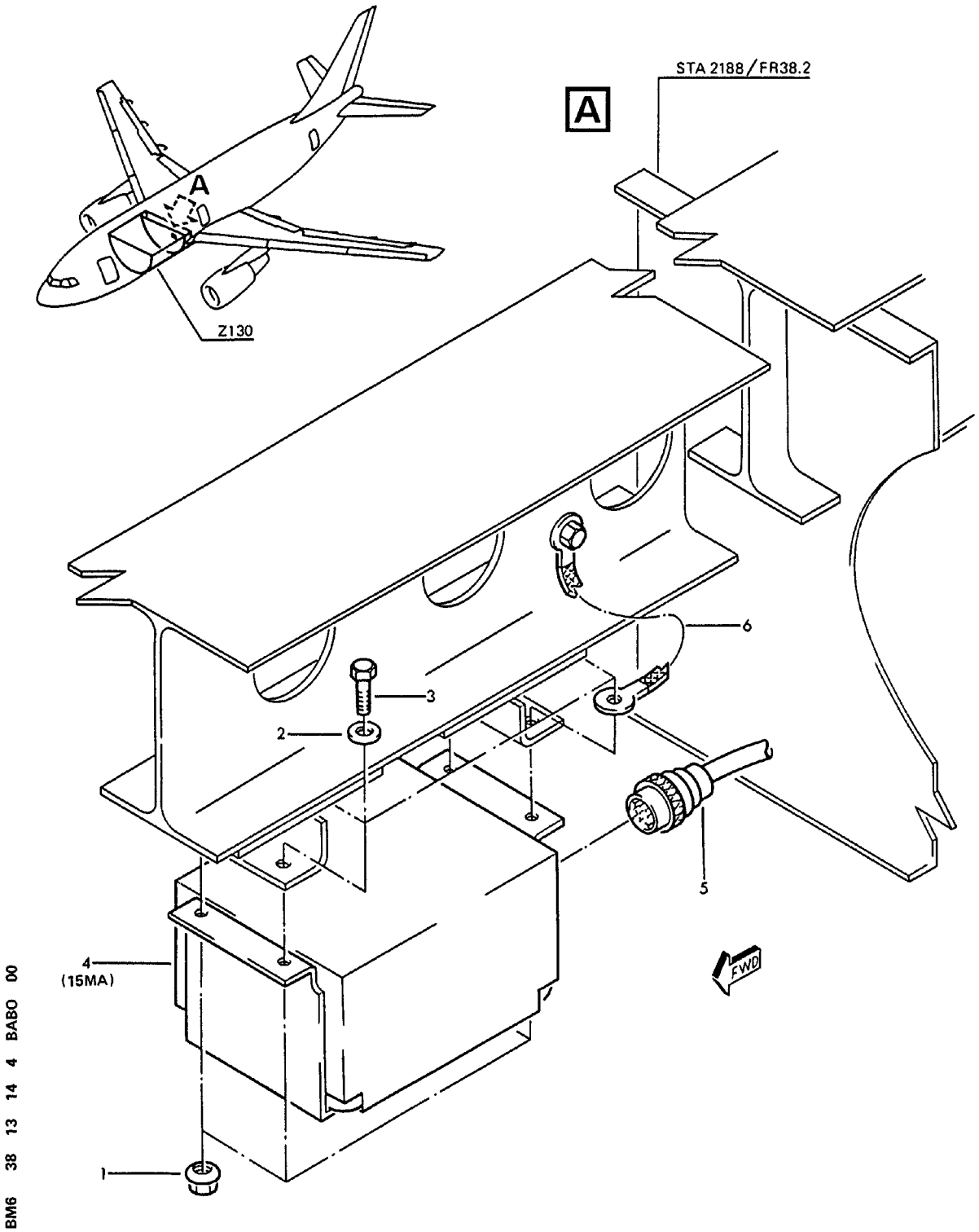
(d)Disconnect plug (5800VC-A) of purser's panel (863VU).

(e)Remove preselection switch wiring pins (P, Q, R, S, T) from plug (5800VC-A).

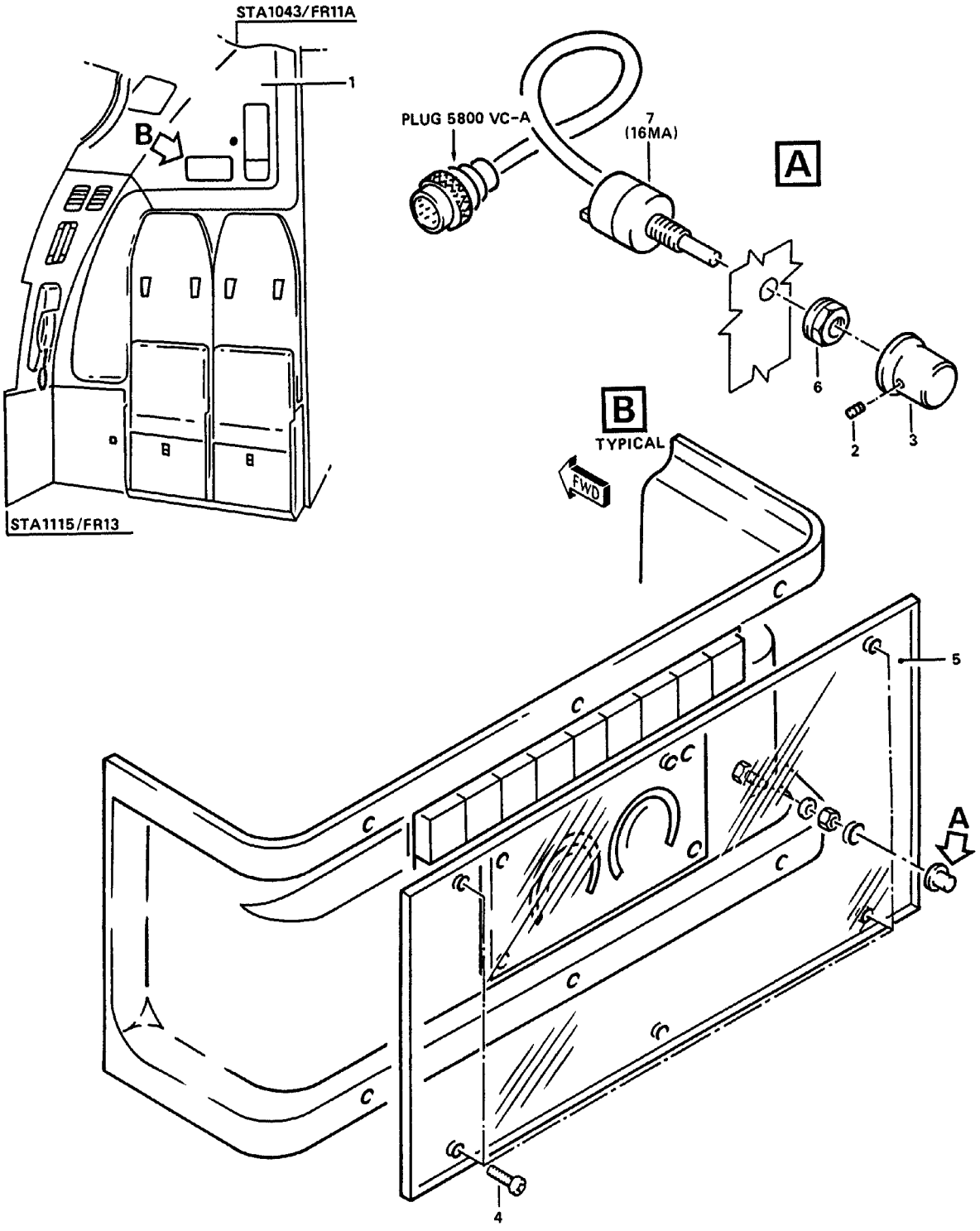
(f)Remove nut (6) and preselection switch (7) (16MA).

C. Installation

NOTE : For electrical bonding procedure refer to 20-28-11, P. Block 1.



Preselection-Control Unit (15MA)
Figure 401



Preselection Switch (16MA)
Figure 402

(Ref. Fig. 401)
(Ref. Fig. 402)
(1)Preselection Control Unit (15MA)
(a)Position preselection control unit (4) (15MA) and bonding strap (6) and install bolts (3), washers (2) and nuts (1).
(b)Remove cap and connect electrical connector (5).
(c)Make certain that installation area is clean and clear of tools and miscellaneous items of equipment.
(2)Preselection Switch (16MA)
(a)Install preselection switch (7) (16MA) and secure with nut (6).
(b)Install preselection switch wiring pins (P, Q, R, S, T) in plug (5800VC-A).
(c)Connect plug (5800VC-A) of purser's panel (863VU).
(d)Install tinted acrylic cover (5) and secure with bolts (4).
NOTE : Tinted acrylic cover is fragile.
(e)Install knob (3) and secure with setscrew (2).
NOTE : The smoke detector selector knob must also be installed, if removed.
(f)Make certain that installation area is clean and clear of tools and miscellaneous items of equipment.
(g)Close access panel (1) at fwd purser station.

D. Test
(1)Carry out functional test of water quantity indication system (Ref. 38-13-00, P. Block 501).

E. Close-Up
(1)Remove safety clip and tag and close circuit breaker 1MA.
(2)Install FWD cargo compartment ceiling panel (132GC) (Ref. 25-54-10, P. Block 201).
(3)Remove safety lock (Ref. 52-30-00, P. Block 301) and close FWD cargo compartment door (Z811).
(4)Remove access platform.
(5)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

WATER DRAINING (DUMP) - DESCRIPTION AND OPERATION

1. General

R **ON A/C 101-200,

The potable water system can be drained via the fill/overflow and drain valve (381511), located above the potable water service panel in zone 136 and through the motorized drain valve (6MP), located above the potable water drain panel in zone 153.

R **ON A/C 001-100,

The potable water system can be drained via the fill/overflow and drain valve (18MA), located above the potable water service panel in zone 136 and through the motorized drain valve (6MP), located above the potable water drain panel in zone 153.

R **ON A/C ALL

2. Component Location

R **ON A/C 101-200,

(Ref. Fig. 001)

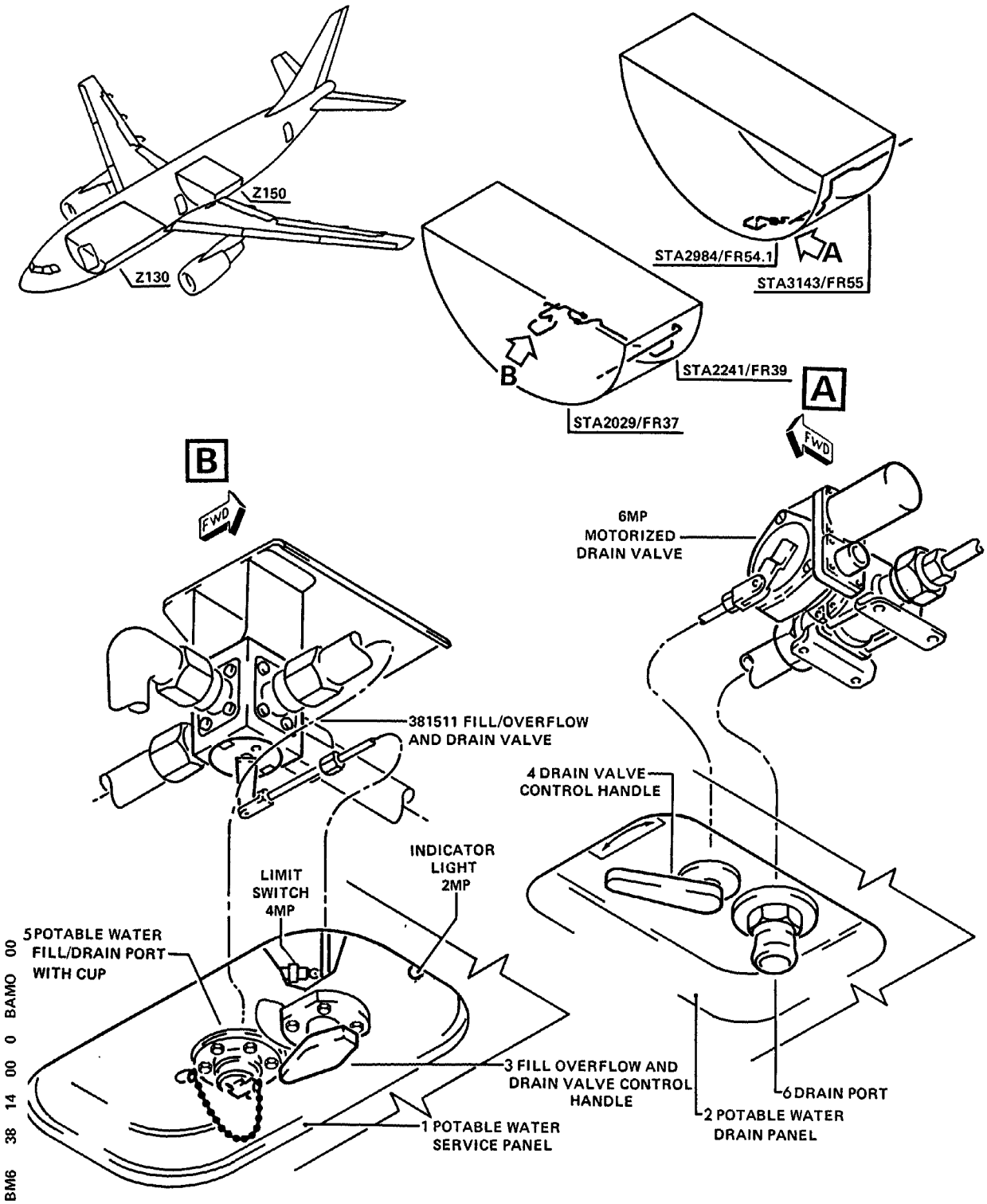
R **ON A/C 001-100,

(Ref. Fig. 002)

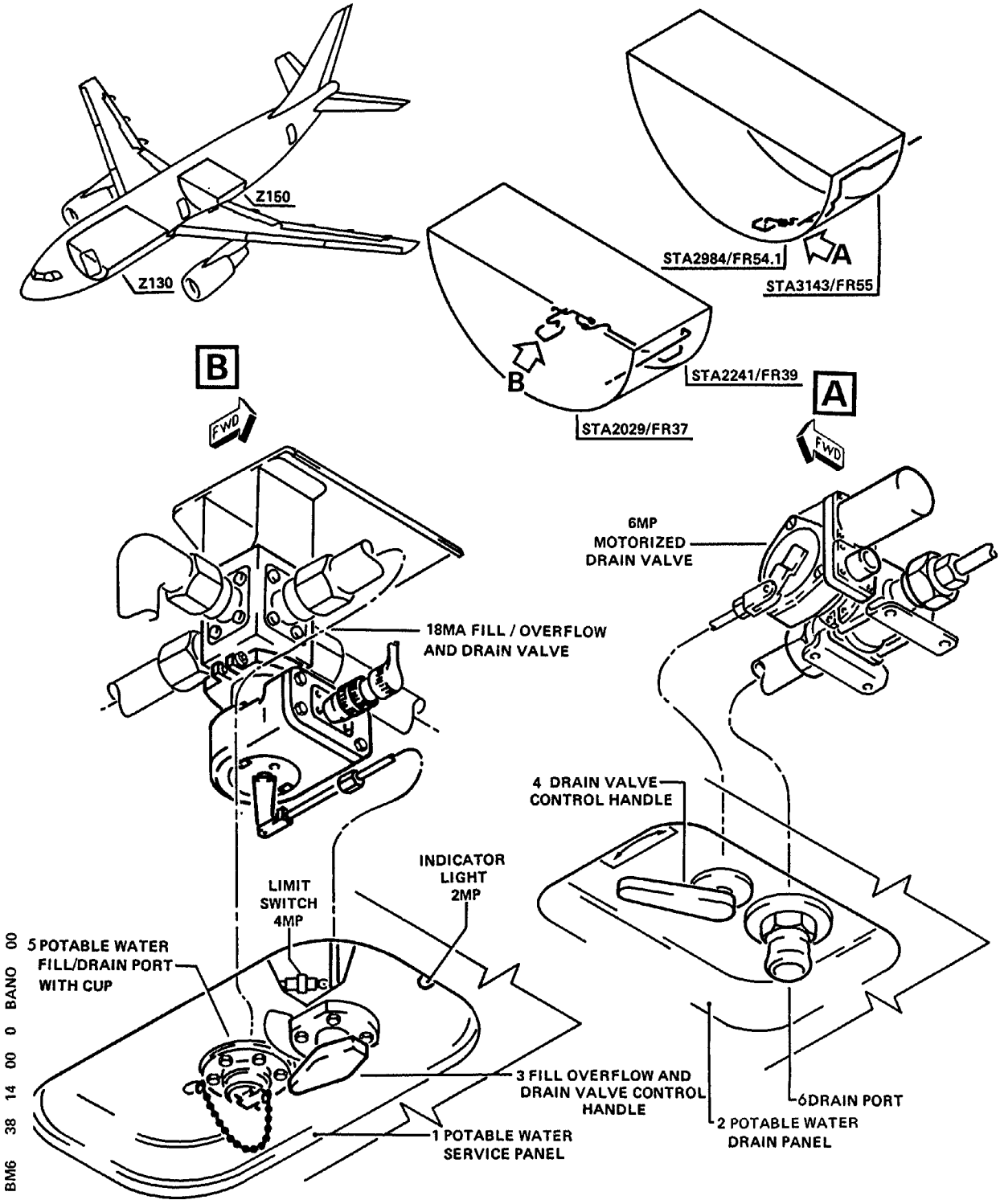
R **ON A/C 101-200,

	FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
	2MP	LIGHT-INDICATOR		136	136BR	
	4MP	SWITCH-LIMIT		136		38-42-13
	6MP	VALVE-MOTORIZED DRAIN		153		38-15-00
	381511	VALVE-FILL/OVERFLOW AND DRAIN		136		38-11-12
	1	PANEL-POTABLE WATER SERVICE		136	136BR	
	2	PANEL-POTABLE WATER DRAIN		153	153AL	
	3	HANDLE-FILL/OVERFLOW AND DRAIN VALVE CONTROL		136	136BR	
	4	HANDLE-DRAIN VALVE CONTROL		153	153AL	
R	5	PORT-POTABLE WATER FILL/DRAIN		136	136BR	
R	6	PORT-DRAIN		153	153AL	

R **ON A/C 001-100,



Component Location
Figure 001



Component Location
Figure 002

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
18MA	VALVE-FILL/OVERFLOW AND DRAIN		136		38-11-12
2MP	LIGHT-INDICATOR		136	136BR	
4MP	SWITCH-LIMIT		136		38-42-13
6MP	VALVE-MOTORIZED DRAIN		153		38-15-00
7MP	RELAY		136		
1	PANEL-POTABLE WATER SERVICE		136	136BR	
2	PANEL-POTABLE WATER DRAIN		153	153AL	
3	HANDLE-FILL/OVERFLOW AND DRAIN VALVE CONTROL		136	136BR	
4	HANDLE-DRAIN VALVE CONTROL		153	153AL	
5	PORT-POTABLE WATER FILL/DRAIN		136	136BR	
6	PORT-DRAIN		153	153AL	

R **ON A/C ALL

3. Description

R **ON A/C 101-200,

The opening and closing of the drain ports is controlled by the fill/overflow and drain valve (381511) which is manually operated and by the motorized drain valve (6MP) which can be operated manually or electrically.

R **ON A/C 001-100,

The opening and closing of the drain ports is controlled by the fill/overflow and drain valve (18MA) which is manually operated and by the motorized drain valve (6MP) which can be operated manually or electrically.

R **ON A/C ALL

4. Operation

R **ON A/C 101-200,

(Ref. Fig. 003, 004)

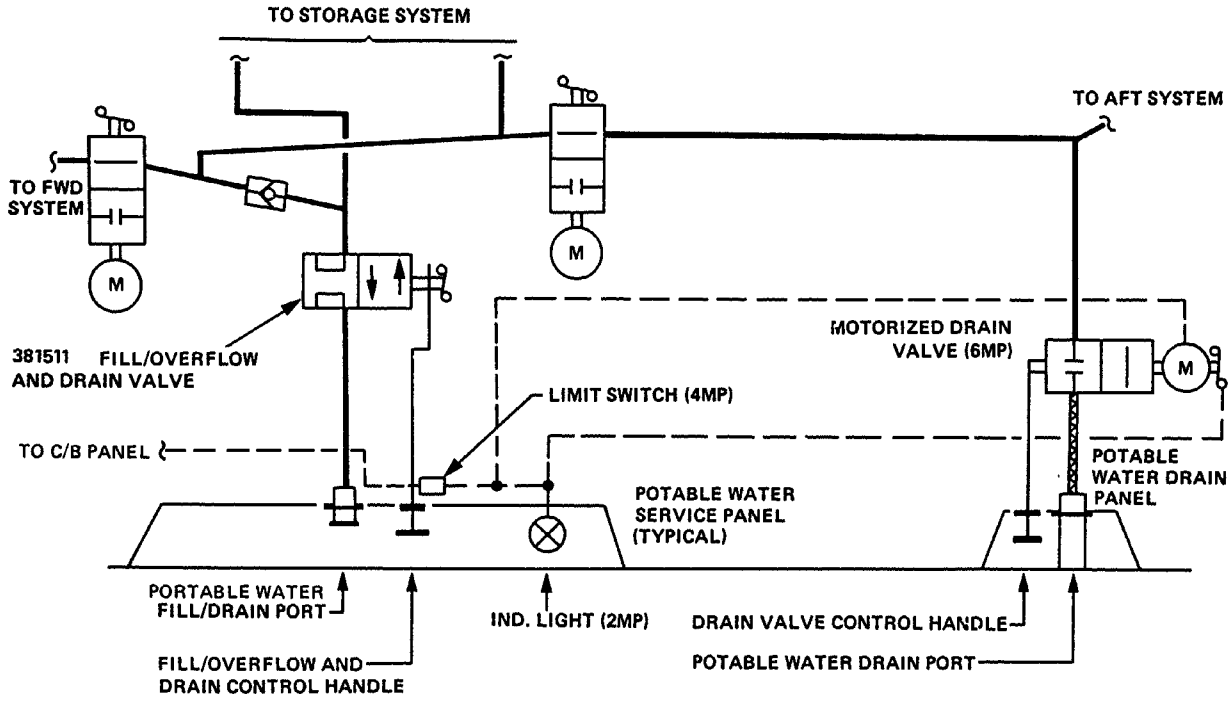
R **ON A/C 001-100,

(Ref. Fig. 005, 006)

R **ON A/C 101-200,

For draining, the fill/overflow and drain valve control handle is to be turned from NORMAL to DRAIN position. This opens the 'fill/drain' and 'overflow' ports of the valve. Furthermore, the limit switch (4MP), located at the potable water service panel is activated, to open the motorized drain valve (6MP) at the potable water drain panel.
While draining, the electrical MD-system is controlled by limit switch (4MP). The drain valve (6MP) in zone 153 can be opened manually by the control handle at the potable water drain panel. The open position of the drain valve is indicated by the control light (2MP) located on the potable water service panel. After completion of draining, the fill/overflow and drain valve control handle is to be turned back to NORMAL position. This action closes both the motorized drain valve (6MP) and the fill/overflow and drain valve(381511). The indicator light (2MP) at the potable water service panel goes off.

R **ON A/C 001-100,



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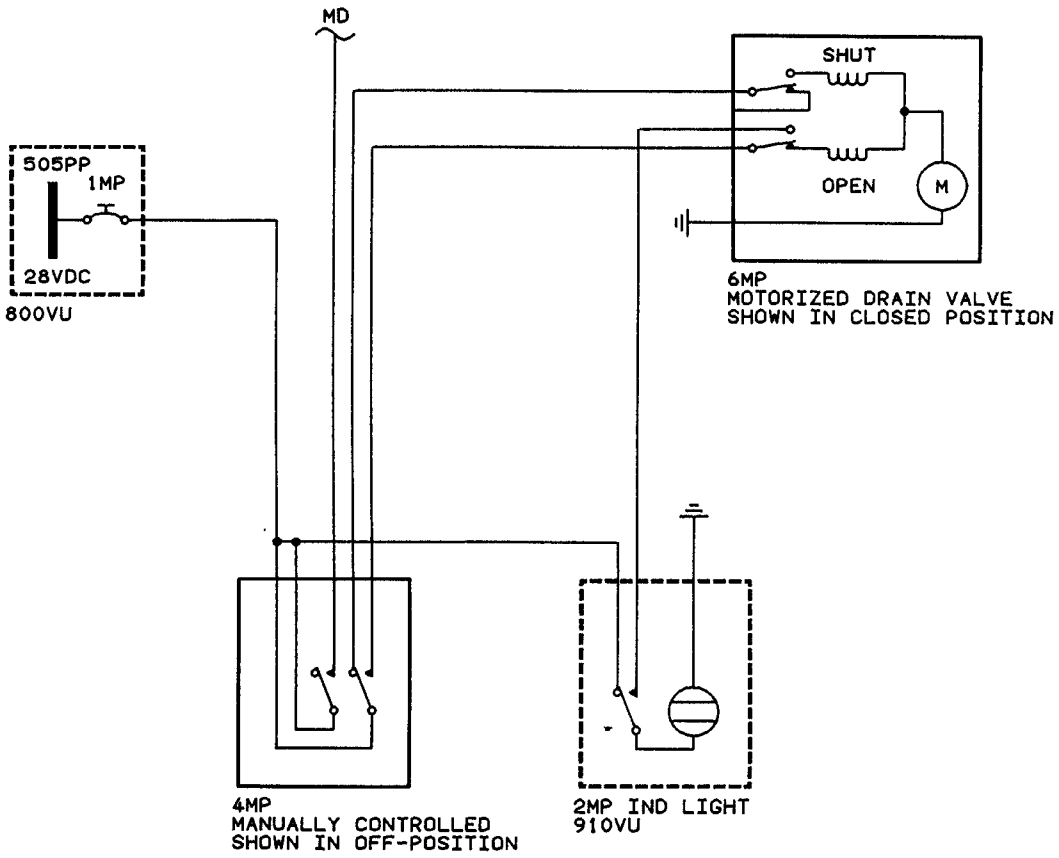
R

Functional Diagram
Figure 003



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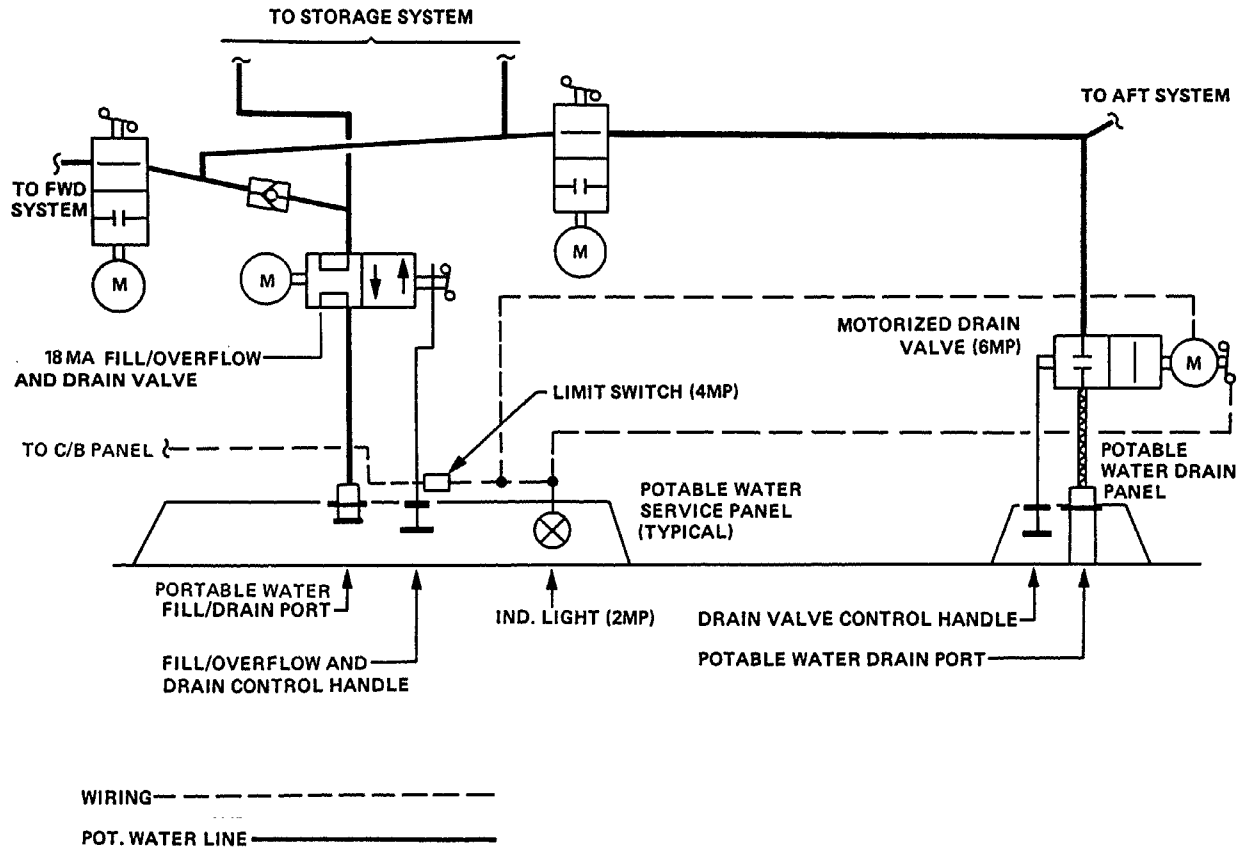
Electrical Schematic
Figure 004

R



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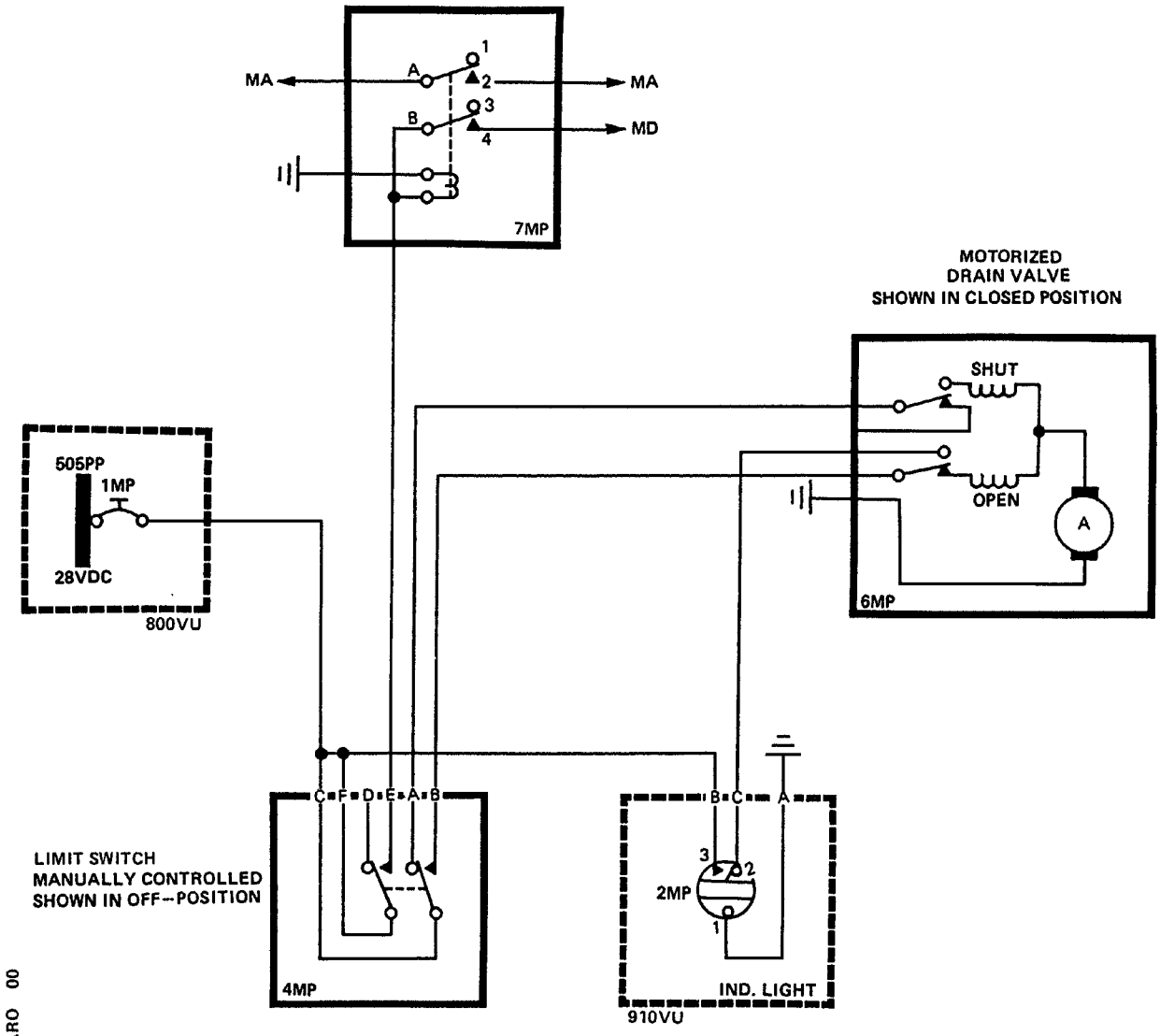
Functional Diagram
Figure 005



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Electrical Schematic
Figure 006

For draining, the fill/overflow and drain valve control handle is to be turned from **NORMAL** to **DRAIN** position. This opens the 'fill/drain' and 'overflow' ports of the valve. Furthermore, the limit switch **(4MP)**,located at the potable water service panel is activated, to open the motorized drain valve **(6MP)** at the potable water drain panel. While draining, the relay **(7MP)**, activated by limit switch **(4MP)**, controls the electrical **MD** and **MA** systems. The drain valve **(6MP)** in zone **153** can be opened by the control handle at the potable water drain panel. The open position of the drain valve is indicated by the control light **(2MP)** located on the potable water service panel.
After completion of draining, the fill/overflow and drain valve control handle is to be turned back to **NORMAL** position. This action closes both the motorized drain valve **(6MP)** and the fill/overflow and drain valve **(18MA)**. The indicator light **(2MP)** at the potable water service panel goes off.

1. System Functional Test

A. Equipment and Materials

ITEM	DESIGNATION
(1)	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz
(2)	Two containers (capacity to suit water charged into system).
(3)	Two Access Platforms 1 m (3 ft.)
(4)	Two Drain Hoses 25.4 mm (1 in.) dia.

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 38-40-00, P. Block 301	Air Supply

B. Procedure

(1)Job Set-Up

(a)Position access platforms and open potable water service panel access door (136BR) and the drain panel access door (153AL).

(b)Place water containers under drain ports.

(c)Release cap from fill/drain port.

(d)Connect drain hoses to drain ports and place free ends into the respective container.

(e)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).

(f)Make certain that electronics racks ventilation is correct.

(g)Make certain that the following circuit breaker is closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MP	H7

(h)Replenish potable water system (Ref. 12-15-38, P. Block 1).

NOTE : For test purposes, it is not necessary to fill storage system to max. capacity.

(j)Pressurize potable water system (Ref. 38-40-00, P. Block 301).

(k)Make certain FWD and AFT main shutoff valves (17MD and 18MD) are open.

(2)Test

ACTION	RESULT
(a)On potable water service panel: - Turn and pull fill/overflow and drain valve control handle from **NORMAL** to **DRAIN** position.	In A/C Zone 130: - Fill/overflow and drain valve opens. In A/C Zone 150: - Motorized drain valve (6MP) opens, activated by limit switch (4MP). On potable water service panel: - Motorized drain valve indicator light (2MP) comes on. At potable water service panel and drain panel: - Water drains via drain ports. **NOTE** : Do not allow potable water system to drain completely.
(b)On potable water service panel: - Push control handle and lock in **NORMAL** position.	In A/C Zone 130: - Fill/overflow and drain valve closes. In A/C Zone 150: - Motorized drain valve (6MP) closes, activated by limit switch (4MP). On potable water service panel: - Motorized drain valve indicator light (2MP) goes off. At potable water service panel and drain panel: - Water discharge at drain ports stops.
(c)On circuit breaker panel (800VU): - Pull **WATER SYSTEM** circuit breaker (1MP) into the open position.	In A/C Zone 150: - Motorized drain valve (6MP) is electrically isolated.
(d)On drain panel: - Place drain valve control handle into the **OPEN** position.	In A/C Zone 150: - Motorized drain valve (6MP) is opened manually. - Water drains via drain port.
(e)On drain panel: - Place drain valve control handle into the **SHUT** position.	In A/C Zone 150: - Motorized drain valve (6MP) is closed manually. On drain panel: - Water discharge at drain port stops.
(f)On circuit breaker panel (800VU): - Push **WATER SYSTEM** circuit breaker (1MP) into the closed position.	In A/C Zone 150: - Motorized drain valve (6MP) is electrically re-energized.

(3)Close-Up
(a)Drain potable water system completely (Ref. 12-24-38, P. Block 1).
(b)Disconnect hoses at drain ports.
(c)Secure cap to fill/drain port.
(d)Wipe dry potable water service panel, drain panel and adjacent areas.
(e)De-energize the aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).
(f)Close potable water service panel access door (136BR) and the drain panel access door (153AL).
(g)Remove access platforms and containers.
(h)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

R **ON A/C 101-200,

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps and Plugs
B. Material No. 05-022	Special Materials (Ref. 20-31-00)
Referenced Procedures	
- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
R - 38-14-13, P. Block 401	Control Cable - Fill/Overflow and Drain Valve
- 38-40-00, P. Block 301	Air Supply

R **ON A/C 001-100,

1. Equipment and Materials

ITEM	DESIGNATION
A.	Circuit Breaker Safety Clips and Tags
B.	Blanking Caps and Plugs
C.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
D. Material No. 05-022	Special Materials (Ref. 20-31-00)
Referenced Procedures	
- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 38-14-13, P. Block 401	Control Cable - Fill/Overflow and Drain Valve
- 38-13-00, P. Block 501	Quantity Indicating
- 38-40-00, P. Block 301	Air Supply

R **ON A/C ALL

2. Procedure

A. Job Set-Up
(1)Drain potable water system (Ref. 12-24-38, P. Block 1).
(2)Remove access door 136AR.
(3)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5

R **ON A/C 101-200,

B. Removal (Ref. Fig. 401)
(1)Disconnect unions (2, 3, 4, 5).
(2)Disconnect control cable (9) at valve (12).
(a)Remove and discard cotter pin (6).
(b)Remove washer (7) and pin (8).
(3)Remove nuts (10) and bolts (11).
(4)Remove fill/overflow and drain valve (12).
(5)Install blanking caps and plugs to all openings.

R **ON A/C 001-100,

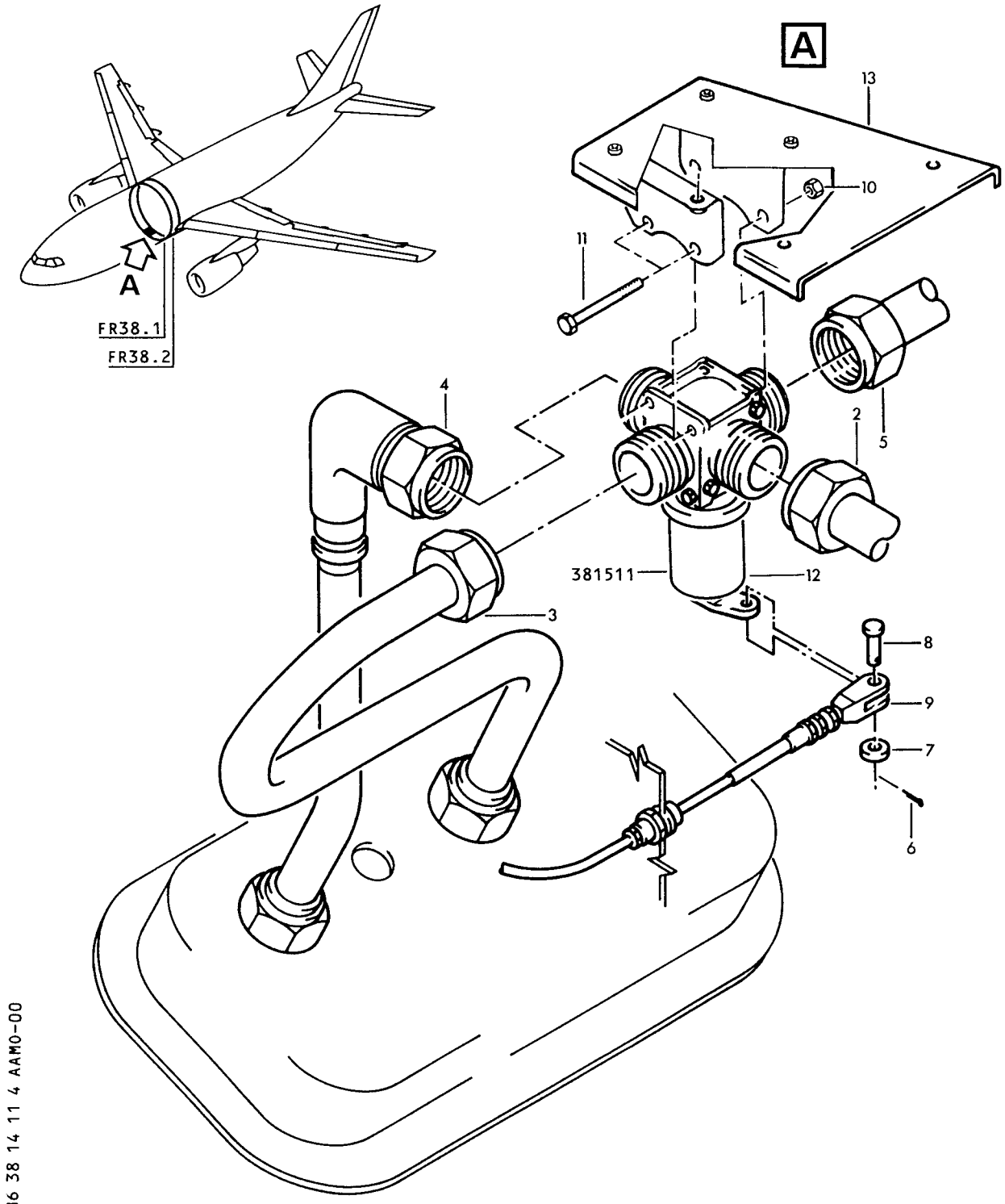
B. Removal (Ref. Fig. 402)
(1)Disconnect electrical connector (1).
(2)Install blanking caps to electrical connections.
(3)Disconnect unions (2, 3, 4, 5).
(4)Disconnect control cable (9) at valve (12).
(a)Remove and discard cotter pin (6).
(b)Remove washer (7) and pin (8).
(5)Remove the nuts (10) and the bolts (11) from the plaque (13).
(6)Remove fill/overflow and drain valve (12).
(7)Install blanking caps and plugs to all openings.

R **ON A/C 101-200,

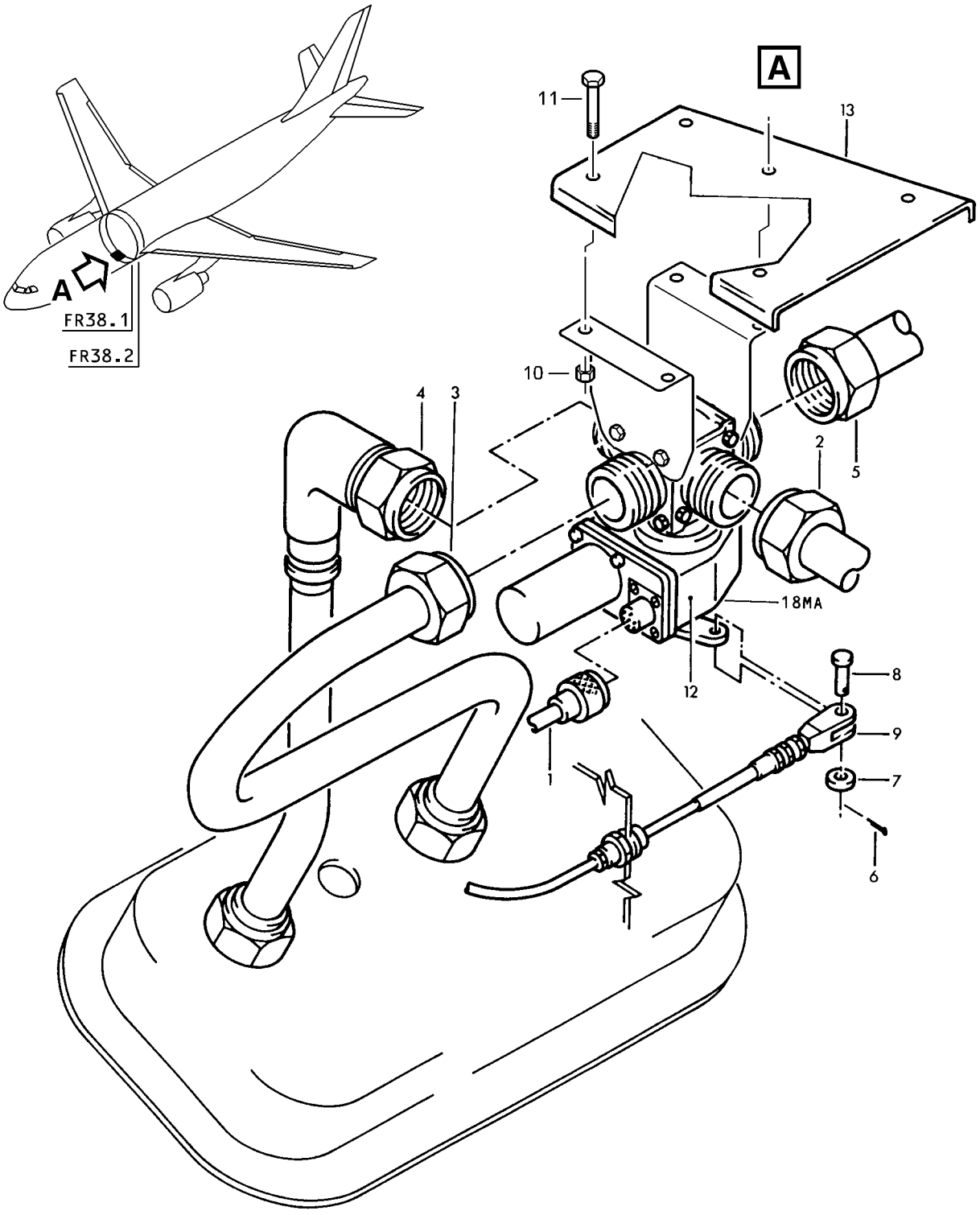
C. Preparation for Installation
(1)Remove old sealing tape from fittings.
(2)Wrap sealing tape (Mat. No. 05-022) around threads of fittings.
(3)Make certain that fill/overflow and drain valve (12) is clean and no external damage is visible.
(4)Remove all blanking caps and plugs from openings

R **ON A/C 001-100,

C. Preparation for Installation
(1)Remove old sealing tape from fittings.
(2)Wrap sealing tape (Mat. No. 05-022) around threads of fittings.
(3)Make certain that fill/overflow and drain valve (12) is clean and no external damage is visible.
(4)Remove all blanking caps and plugs from openings and electrical



Fill/Overflow and Drain Valve
Figure 401



BM6 38 14 11 4 ACMD 01

Fill/Overflow and Drain Valve
Figure 402

connections.

R **ON A/C 101-200,

D. Installation (Ref. Fig. 401)
(1)Put fill/overflow and drain valve (12) in position under bracket (13).
(2)Install bolts (11) and nuts (10).
(3)Connect unions (2, 3, 4, 5).
(4)Connect control cable (9) at valve (12).
(a)Install pin (8), washer (7) and cotter pin (6).
(b)Check operation of control cable and adjust, if necessary
R (Ref. 38-14-13, P. Block 401).

R **ON A/C 001-100,

D. Installation (Ref. Fig. 402)
(1)Put fill/overflow and drain valve (12) in position under bracket (13).
(2)Install bolts (11) and nuts (10).
(3)Connect unions (2, 3, 4, 5).
(4)Connect control cable (9) at valve (12).
(a)Install pin (8), washer (7) and cotter pin (6).
(b)Check operation of control cable and adjust, if necessary
(Ref. 38-14-13, P. Block 401).
(5)Connect electrical connector (1).

R **ON A/C 101-200,

E. Test
(1)Replenish potable water system (Ref. 12-15-38, P. Block 1)
and pressurize water system (Ref. 38-40-00, P. Block 301).
(2)Check all connections for leakage.
NOTE : Leakage is not permissible.

R **ON A/C 001-100,

E. Test
(1)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(2)Replenish potable water system (Ref. 12-15-38, P. Block 1)
and pressurize water system (Ref. 38-40-00, P. Block 301).
(3)Check all connections for leakage.
NOTE : Leakage is not permissible.
(4)Remove safety clips and tags and close circuit breakers 1MA.
(5)Check shutoff function of fill/overflow and drain valve (Ref. 38-13-00, P. Block 501).

R **ON A/C 101-200,

F. Close-Up
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Install access door 136AR.

R **ON A/C 001-100,

F. Close-Up
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Install access door 136AR.
(3)De-energize the aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

**ON A/C ALL

1. Equipment and Materials

ITEM	DESIGNATION
A.	Circuit Breaker Safety Clips and Tags
B.	Blanking Caps and Plugs
C.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
D. Material No. 05-022	Special Materials (Ref. 20-31-00)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 25-55-10, P. Block 201	AFT Cargo Compartment Linings
- 38-40-00, P. Block 301	Air Supply
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors

**ON A/C ALL

A. Job Set-Up
(1)Drain potable water system (Ref. 12-24-38, P. Block 1).
(2)Open AFT cargo compartment door (Ref. 52-30-00, P. Block 301).
(3)Remove cargo compartment sidewall panel 151FW (Ref. 25-55-10, P. Block 201).
(4)Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MP	H 7

**ON A/C ALL

B. Removal (Ref. Fig. 401)

(1)Disconnect electrical connector (1).
(2)Install blanking caps to electrical connections.
(3)Disconnect control cable (5) at lever (3).
(a)Remove cotter pin (7), washer (6) and pin (4).
(b)Discard cotter pin (7).
(4)Disconnect unions (8, 11).
(5)Remove screws (13), washers (12),insulating plates (10) and spacers (9).
(6)Remove drain valve (2) (6MP).
(7)Install blanking caps and plugs to all openings.

**ON A/C ALL

C. Preparation for Installation
(1)Remove old sealing tape from fittings.
(2)Wrap sealing tape (Mat. No. 05-022) around threads of fittings.
(3)Make certain that drain valve is clean and no external damage is visible.
(4)Remove all blanking caps and plugs from openings and electrical connections.

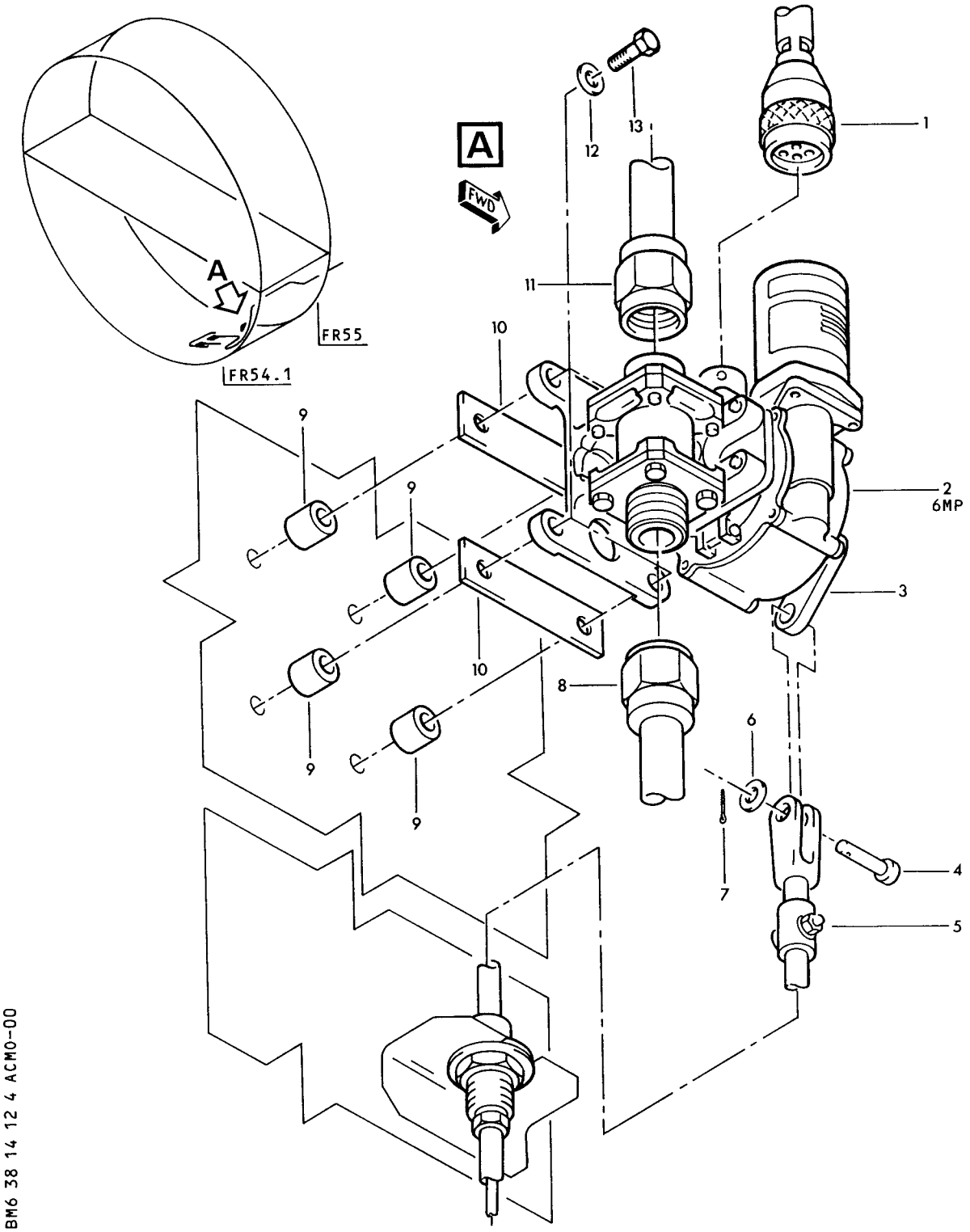
**ON A/C ALL

R

D. Installation (Ref. Fig. 401)
(1)Put spacers (9) and insulating plates (12) in position.
(2)Put drain valve (2) (6MP) in position on insulating plates (10).
(3)Install screws (13) and washers (12).
(4)Connect unions (8, 11).
(5)Connect control cable (5) to lever (3).
(a)Put control cable (5) in position on lever (3).
(b)Install pin (4), washer (6) and cotter pin (7).
(6)Connect electrical connector (1).

**ON A/C ALL

E. Test
(1)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(2)Replenish potable water system (Ref. 12-15-38, P. Block 1) and pressurize water system (Ref. 38-40-00, P. Block 301).
(3)Check all connections for leakage.
NOTE : Leakage is not permissible.
(4)Open water service panel 136BR and water drain panel 153AL.
(5)Remove safety clips and tags and close circuit breaker 1MP.
(6)Start electrical draining (Ref. 12-24-38, P. Block 1).
(7)Make sure that water drains out of the water service panel 136BR drain



Motorized Drain Valve
Figure 401

port and the drain panel 153AL drain port.
(8)Stop electrical draining (Ref. 12-24-38,P. Block 1).
(9)Make sure that waterflow stops at both drain ports.
(10)At drain panel 153AL turn drain valve control handle from SHUT to OPEN position.
(11)Make sure that water drains out of the drain panel 153AL drain port.
(12)At drain panel 153AL turn drain valve control handle from OPEN to SHUT position.
(13)Make sure that waterflow stops at drain port.

**ON A/C ALL

R

F. Close-Up
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Install cargo compartment sidewall panel 151FW (Ref. 25-55-10, P. Block 201).
(3)Close AFT cargo compartment door (Ref. 52-30-00, P. Block 301).
(4)Close water service panel 136BR and water drain panel 153AL.
(5)De-energize the aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

CONTROL CABLE - FILL/OVERFLOW AND DRAIN VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Torque Wrench, up to 1.0 m.daN (88.5 lbf.in.)
B.	Corrosion-Resistant Steel Lockwire, 0.8 mm (0.032 in.) dia.
C.	Cotterpin
D.	Access Platform, 2.7 m (9 ft.)
E.	Access Platform, 1.0 m (3 ft.)
F. Material No. 04-004	Common Greases (Ref. 20-31-00)
G. Material No. 05-020	Special Materials (Ref. 20-31-00)
H. Material No. 09-002	Sealants (Ref. 20-31-00)
J. Material No. 09-007	Sealants (Ref. 20-31-00)

Referenced Procedures

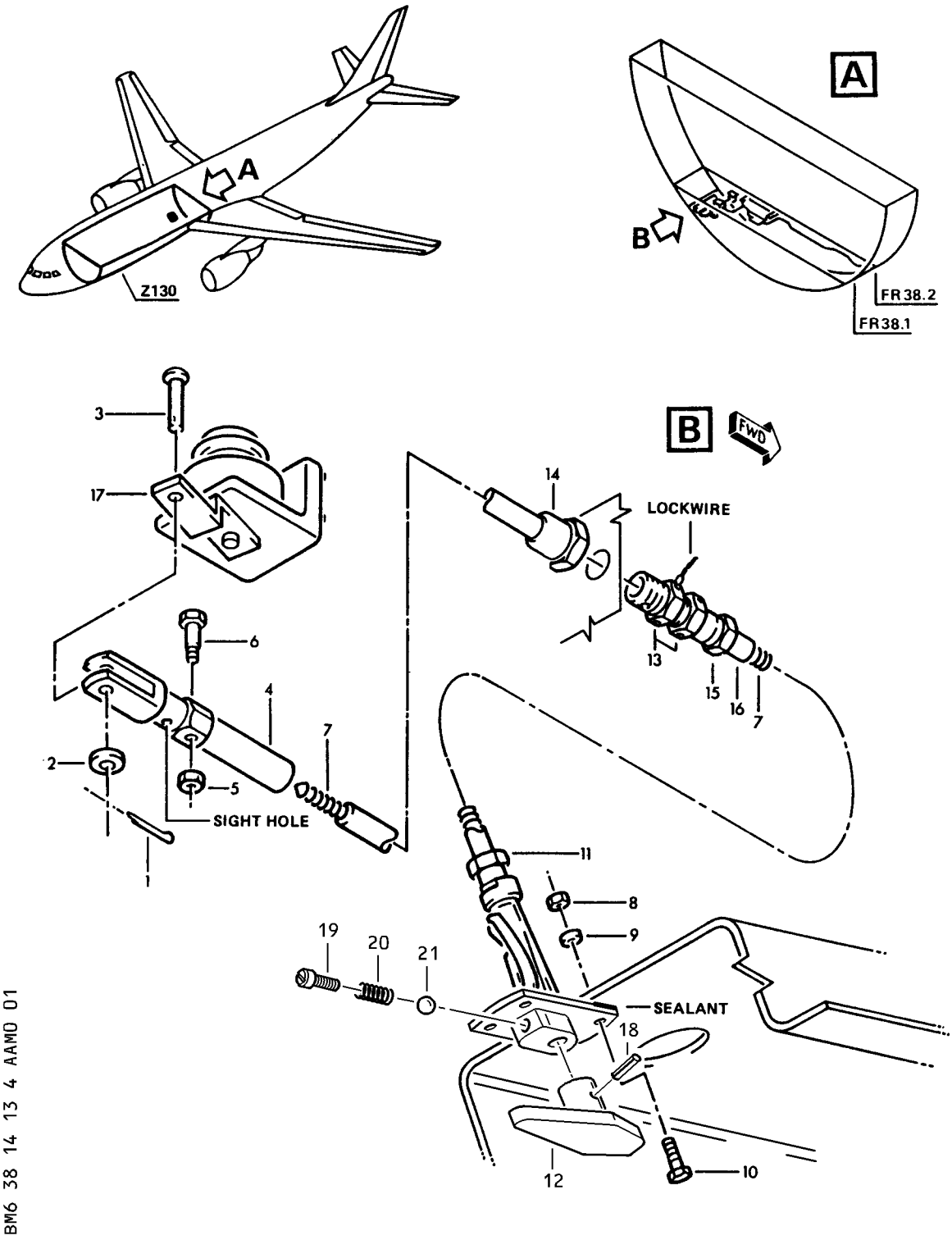
- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors

2. Procedure

A. Job Set-Up
(1)Position access platform at FWD cargo compartment door.
(2)Position access platform at potable water service access door.
(3)Open potable water service access door 136BR.
(4)Drain potable water system (Ref. 12-24-38, P. Block 1).
(5)Open FWD cargo compartment door (Ref. 52-30-00, P. Block 301).
(6)Remove floor panels 132WF, 132ZF and 132YF.

B. Removal (Ref. Fig. 401)
(1)At fill/overflow and drain valve:
(a)Remove cotter pin (1) and discard.
(b)Remove washer (2) and pin (3).
(c)Remove nut (5).
(d)Disconnect clevis (4) by rotating clockwise.
NOTE : The clevis (4) has a left-hand thread.
(e)Remove the bolt (6).
(2)At water service panel:
(a)Remove nuts (8), washers (9) and bolts (10).
(b)Release nut (11), pull handle (12) with cable (7) out of tube.
(3)Removal of tube (16).
(a)Release nut (15) and remove tube (16).
(b)Remove lockwire, release locknuts (13).
R (c)Remove the sleeve (14).

C. Preparation for Installation
(1)Remove old sealant from potable water service panel.
(2)Apply release agent (Mat. No. 05-020) to base of handle.



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Fill/Overflow and Drain Valve Control Cable
Figure 401

R

(3)Make sure that the control cable is not kinked or broken.
(4)Apply grease (Mat. No. 04-004) to all end fittings and threads.

D. Installation (Ref. Fig. 401)
(1)Installation of tube (16).
(a)Install sleeve (14), secure with locknuts (13) and safety with corrosion-resistant steel lockwire 0.8 mm (0.032 in.) dia.
R (b)Install tube (16) and hand tighten nut (15).
(2)At water service panel:
(a)Install cable (7) with handle (12) in tube (16).
(b)Install bolts (10), washers (9) and nuts (8).
NOTE : Make sure that handle (12) is turned to Flight position and pushed fully in.
(c)Hand tighten nut (11).
(3)At fill/overflow and drain valve:
(a)Insert bolt (6) in clevis (4).
(b)Screw clevis (4) onto cable (7) by rotating it counterclockwise until cable end is visible through the sight hole.
NOTE : The clevis (4) has a left-hand thread.
(c)Install nut (5) and hand tighten it.
(4)Adjustment
(a)Using pin (3), temporarily connect clevis (4) to valve lever (17).
(b)Operate handle and make certain that fill/overflow and drain valve opens and closes fully. If required, adjust cable by rotating clevis (4).
NOTE : When valve is fully open, handle must extend approx. 37 mm (1.45 in.).
(c)Move handle to fully closed position.
(d)Disconnect clevis (4) from valve lever (17) by removing pin (3).
(e)Try to move valve lever (17) manually further to the closed position.
NOTE : It shall not be possible to move the valve lever any further.
(f)Using pin (3), temporarily connect clevis (4) to valve lever (17).
(g)Move handle to fully open position.
(h)Disconnect clevis (4) from valve lever (17) by removing pin (3).
(j)Try to move valve lever (17) manually further to the open position.
NOTE : It shall not be possible to move the valve lever any further.
(k)Secure clevis to lever (17) with pin (3), washer (2) and new cotter pin (1).
(l)TORQUE nut (11) and (15) to 0.8 m.daN (70.8 lbf.in.) and safety with corrosion-resistant steel lockwire 0.8 mm (0.032 in.) dia.
(m)Apply a fillet of sealant (Mat. No. 09-007) around base of handle (12), when dry coat over with sealant (Mat. No. 09-002).

E. Close-Up
(1)Replenish potable water system (Ref. 12-15-38, P. Block 1).
(2)Install panels 132WF, 132ZF and 132YF.
(3)Close FWD cargo compartment door (Ref. 52-30-00, P. Block 301).
(4)Remove access platforms.
(5)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

CONTROL CABLE - MOTORIZED DRAIN VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Torque Wrench, up to 2.0 m.daN (177 lbf.in.)
B.	Corrosion-Resistant Steel Lockwire, 0.8 mm (0.032 in.) dia.
C.	Cotter pins
D.	Access Platform, 2.7 m (9 ft.)
E.	Access Platform, 1.0 m (3 ft.)
F. Material No. 04-004	Common Greases (Ref. 20-31-00)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 25-55-10, P. Block 201	AFT Cargo Compartment - Linings
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
- 53-10-33, P. Block 401	AFT Cargo Compartment Floor Panels

2. Procedure

A. Job Set-Up
(1)Position access platform at AFT cargo compartment door.
(2)Position access platform at motorized drain valve access door.
(3)Open motorized drain valve access door 153AL.
(4)Drain potable water system (Ref. 12-24-38, P. Block 1).
(5)Open AFT cargo compartment door (Ref. 52-30-00, P. Block 301).
(6)Remove cargo compartment floor panels 151AF and 151BF (Ref. 53-10-33, P. Block. 401).
(7)Remove cargo compartment sidewall panel 151FW (Ref. 25-55-10, P. Block. 201).

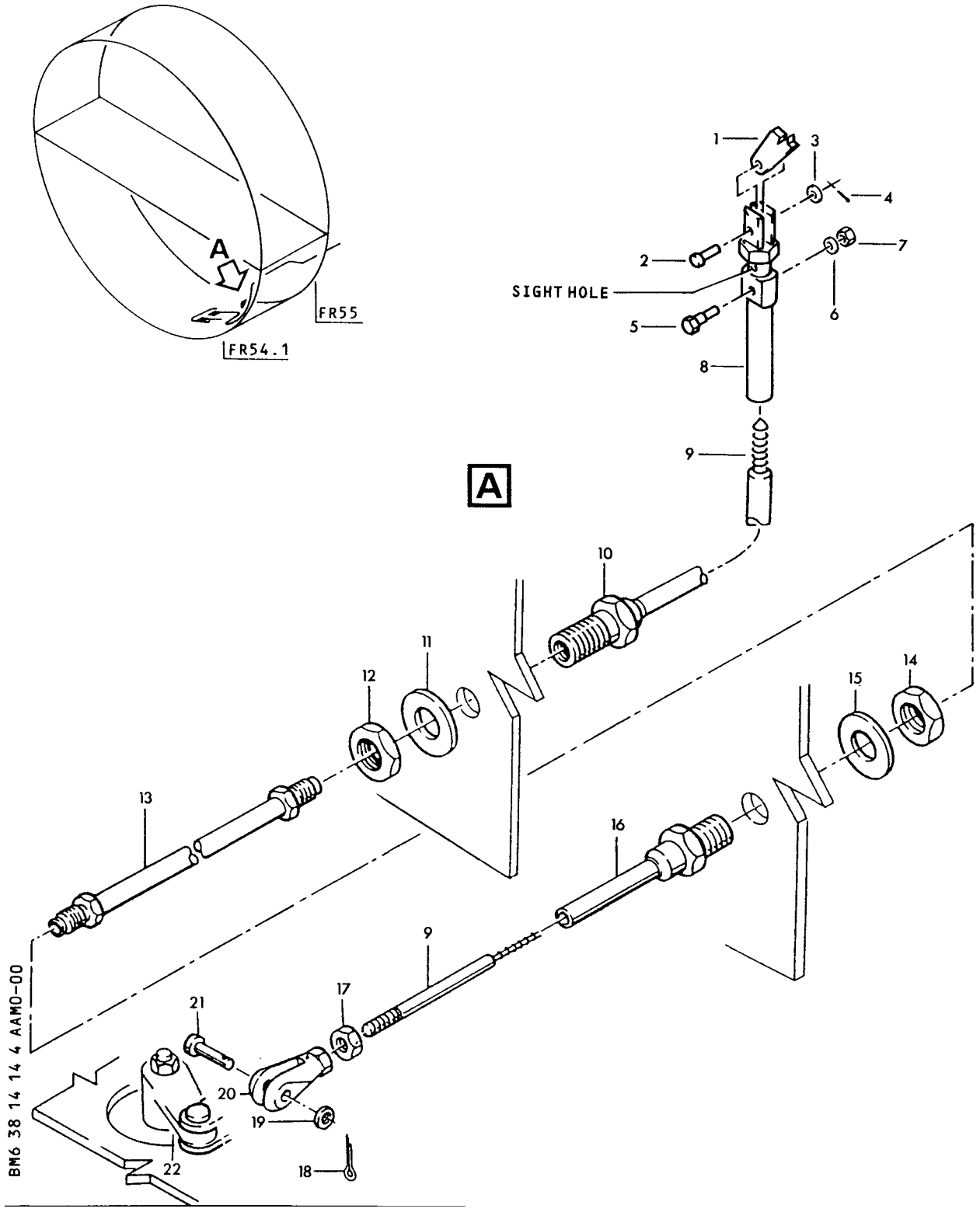
B. Removal (Ref. Fig. 401)
(1)At motorized and drain valve:
(a)Remove cotter pin (4) and discard.
(b)Remove washer (3) and pin (2).
(c)Remove nut (7) and washer (6).
(d)Disconnect sliding end (8) by rotating clockwise.
NOTE : The sliding end (8) has a left-hand thread.
(e)Remove screw (5).
(2)At motorized drain valve access panel:
(a)Remove cotter pin (18) and discard.
(b)Remove washer (19) and pin (21).
(c)Cut the lockwire and release nut (17).
(d)Remove clevis (20) and nut (17) from cable (9).
(e)Pull cable (9) from casing (13).
(3)Removal of casing (13).
(a)Release nuts (12) and (14).
(b)Turn swivel ends (10) and (16) until casing (13) is free.

(c)Remove casing (13).
(d)Remove swivel ends (10) and (16), washers (11) and (15) and nuts (12) and (14).

C. Preparation for Installation
(1)Make sure that the control cable is not kinked or broken.
(2)Apply grease (Mat. No. 04-004) to all end fittings and threads.

D. Installation (Ref. Fig. 401)
(1)Installation of casing (13).
(a)Put swivel ends (10) and (16) inposition.
(b)Install washers (11) and (15) and nuts (12) and (14) but do not tighten
(c)Install casing (13).
(d)TORQUE tighten casing (13) to 0.7 to 0.8 m.daN (62 to 71 lbf.in.).
(e)TORQUE tighten nuts (12) and (14) to 1.9 to 2.0 m.daN (168 to 177 lbf.in.).
(f)Insert cable (9) into casing (13).
(2)At motorized drain valve access panel:
(a)Install nut (17) and clevis (20) on cable (9), but do not tighten.
NOTE : Make sure that handle (22) is turned to CLOSED position.
(3)At motorized and drain valve:
(a)Install screw (5), washer (6) and nut (7), but do not tighten.
(b)Screw sliding end (8) onto cable (9) by rotating it counterclockwise until cable end is visible through the sight hole.
NOTE : The sliding end (8) has a left-hand thread.
(c)TORQUE tighten nut (7) to between 0.2 to 0.3 m.daN (18 to 27 lbf.in.).
(4)Adjustment
(a)Using pin (2), temporarily connect sliding end (8) to valve lever (1).
(b)Using pin (21), temporarily connect clevis (20) to lever (22).
(c)Operate handle and make certain that motorized drain valve opens and closes fully. If required, adjust cable by rotating clevis (20).
(d)Move handle to fully closed position.
(e)Disconnect sliding end (8) from valve lever (1) by removing pin (2).
(f)Try to move valve lever (1) manually further to the closed position.
NOTE : It shall not be possible to move the valve lever any further.
(g)Using pin (2), temporarily connect sliding end (8) to valve lever (1).
(h)Move handle to fully open position.
(j)Disconnect sliding end (8) from valve lever (1) by removing pin (2).
(k)Try to move valve lever (1) manually further to the open position.
NOTE : It shall not be possible to move the valve lever any further.
(l)Secure sliding end (8) to lever (1) with pin (2), washer (3) and new cotter pin (4).
(m)TORQUE nut (17) to 0.6 to 0.7 m.daN (53 to 62 lbf.in.) and safety with corrosion-resistant steel lockwire 0.8 mm (0.032 in.) dia.
(n)Secure clevis (20) to lever (22) with pin (21), washer (19) and new cotter pin (18).

E. Close-Up
(1)Install cargo compartment floor panels 151AF and 151BF (Ref. 53-10-33, P. Block 401).



Motorized Drain Valve Control Cable
Figure 401

(2)Install cargo compartment sidewall panel 151WF (Ref. 25-55-10, P. Block 201).
(3)Close AFT cargo compartment door (Ref. 52-30-00, P. Block 301).
(4)Replenish potable water system (Ref. 12-15-38, P. Block 1).
(5)Close motorized drain valve access door 153AL.
(6)Remove access platforms.
(7)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

WASTE DISPOSAL - DESCRIPTION AND OPERATION

1. General

Disposal of waste matter and fluids from galleys and lavatories is achieved by the following subsystems of the waste disposal system:

- Waste Water Drain (38-32-00)
- Vacuum Toilet System (38-35-00)

2. Description

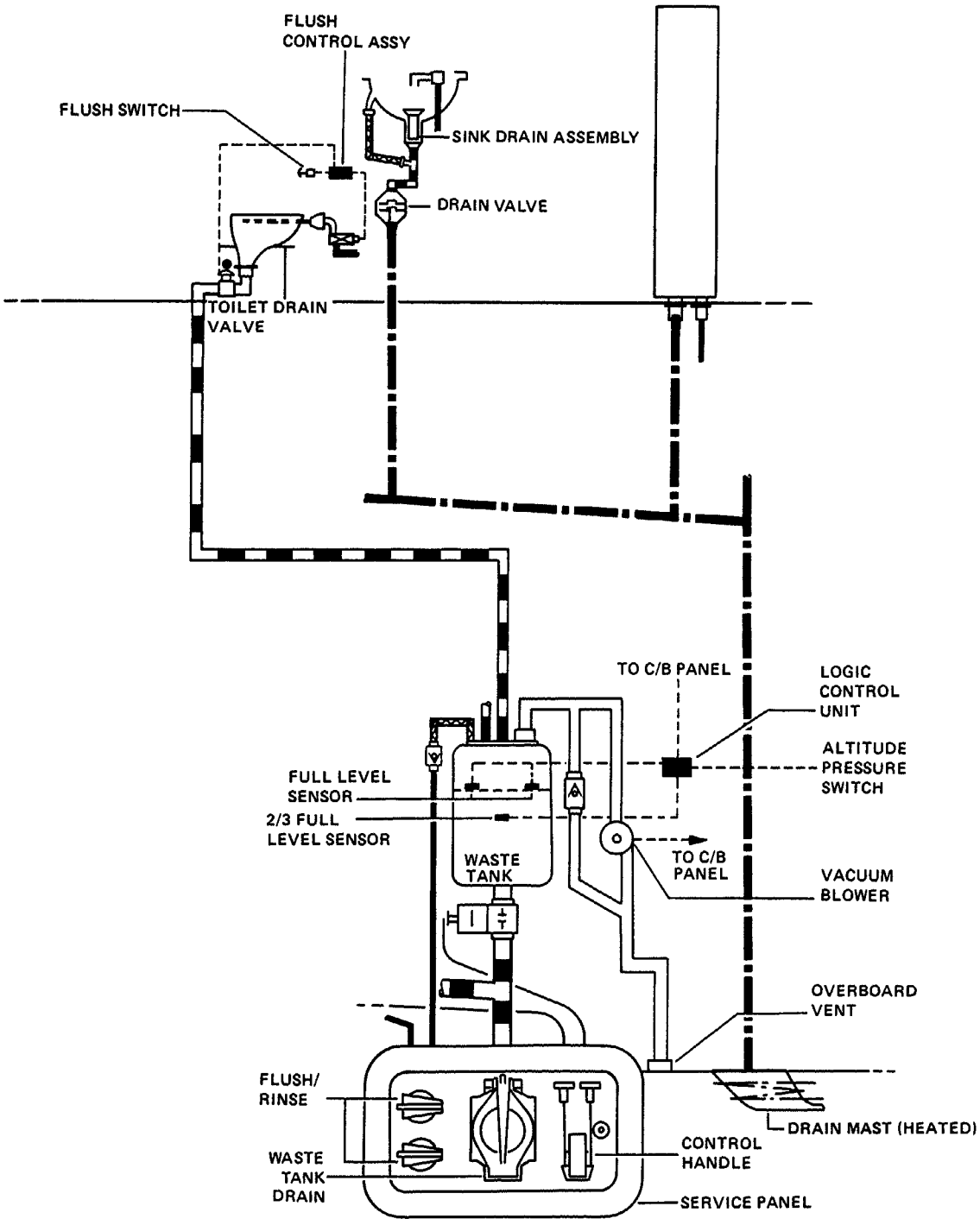
(Ref. Fig. 001)

A. Vacuum Toilet System

The toilet system collects waste matter in two waste tanks, located in the rear aircraft underfloor section, by vacuum draining. The tanks are emptied and cleaned during ground service.

B. Waste Water Drain

The waste water drain conveys waste water from lavatory washbasins and galley sinks overboard via heated drain masts.
Drain valves are installed to avoid cabin pressure loss via waste water drain lines.



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Functional Diagram
Figure 001

TOILET SYSTEM - INSPECTION/CHECK

1. Reason for the Job

R - To check that the drain and filler caps of the service panels are correctly installed and the seals are serviceable.
R - General visual inspection of waste tanks and drain pipes.

R A. Equipment and Material

ITEM	DESIGNATION
A.	Access Platform 2 m (6 ft. 7 in.)

R B. Procedure

R (1)Job Set-Up
R (a)Position the access platform at the relevant service panel.

R (2)Check of the water service panel (Ref. Fig. 601)
R (b)Open the water service access door 136BR.
R (b)Remove the filler cap (3).
R (c)Make sure that the seal inside the filler cap (3) is not worn or damaged.
R (d)Make sure that the chain (4) is not damaged or missing.
R (e)Install the filler cap (3).
R (f)Close the water service access door 136BR.

R (3)Check of the toilet service panel (Ref. Fig. 601)
R (a)Open the toilet service access door 171BL.
R (b)Open the filler caps (1).
R (c)Make sure that the seal inside the filler caps is not worn or damaged.
R (d)Close the filler caps (1).
R (e)Open the toilet drain cap (2).
R (f)Make sure that the seal inside the toilet drain cap (2) is not worn or damaged.
R (g)Close the toilet drain cap (2).
R (h)Close the toilet service access door 171BL.

R (4)Close-Up
R (a)Make sure that the working area is clean and clear of tools and miscellaneous items of equipment.
R (b)Remove the access platform.

R 2. Waste Tanks and Drain Pipes - Inspection/Check

A. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform 2,7 m (9 ft.)
B.	Light Source - Inspection

ITEM	DESIGNATION
C.	Mirror - Inspection

Referenced Procedures
- 52-30-00, P. Block 301 — FWD and AFT Cargo Compartment
R - 25-54-10, P. Block 201 — FWD Cargo Compartment Linings
R - 53-10-35, P. Block 401 — Bulk Cargo Compartment Floor Panels

R B. Procedure

(1)Job Set-Up
(a)In sanitary unit cabinets, place all manual shutoff valves in the closed position.
(b)To gain access to forward and mid drain pipes proceed as follows:
R 1 Position access platform under FWD cargo compartment door (Z811).
2 Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-30, P. Block 301).
3 Open avionics compartment doors (131AZ and 132AZ) to gain access to forward drain pipes.
4 Remove appropriate FWD cargo compartment ceiling panels to gain access to mid drain pipes (Ref. 25-54-10, P. Block 201).

NOTE : If necessary, remove adjacent sidewall panels to gain additional access (Ref. 25-54-10, P. Block 201).

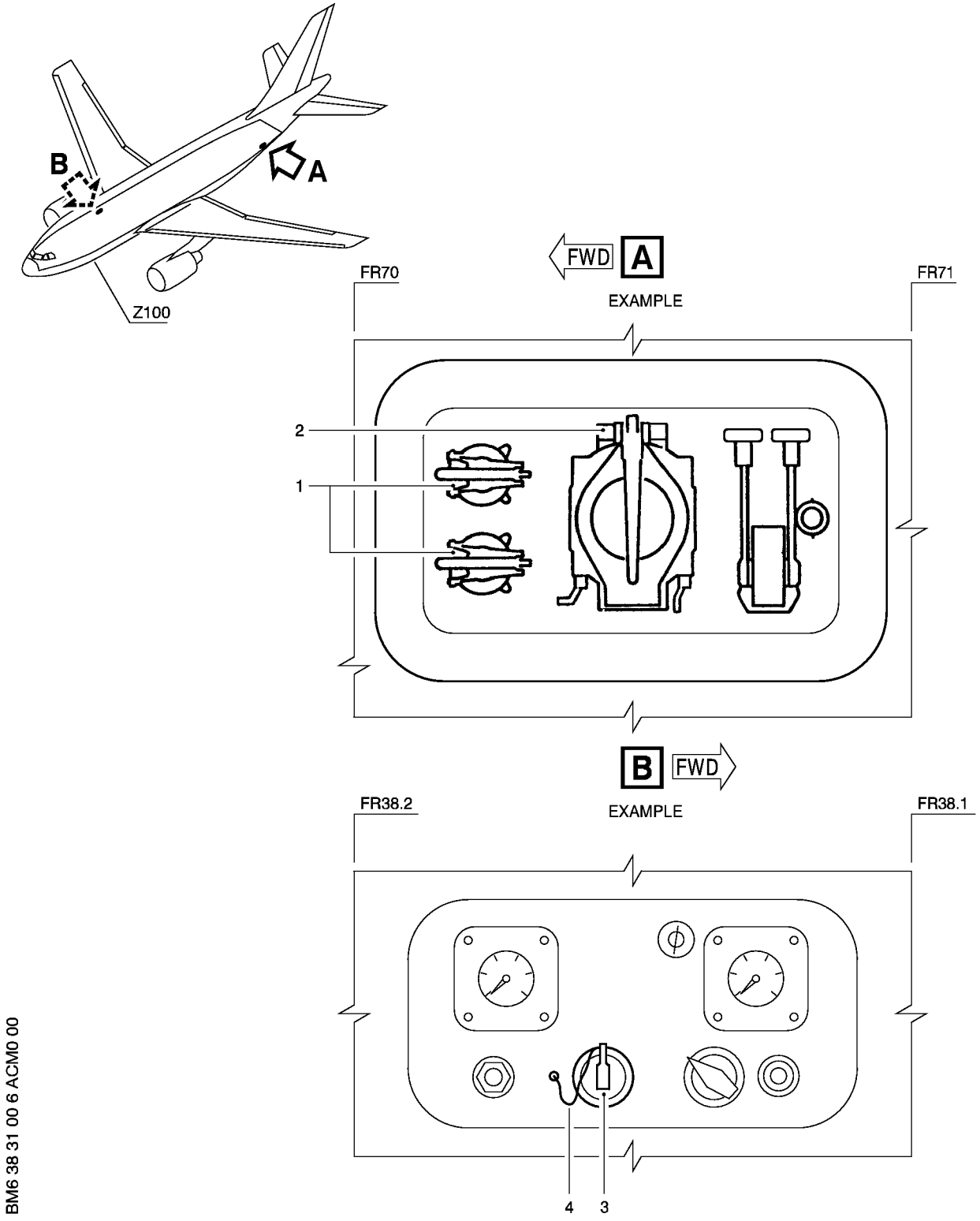
(c)To gain access to aft drain pipes, proceed as follows:
1 Position access platform and open BULK cargo compartment door (Z813).
2 Open access door (162AZ) to gain access to aft drain pipes (Ref. 53-10-35, P. Block 401).

R (2)General Visual Inspection
R (a)Visually examine the waste tanks and drain pipes for:
- damages
- leakage

NOTE : Leakage is not permissible.

- proper attachment.

(3)Close-Up
R (a)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
R (b)Close avionics compartment doors (131Az and 132AZ).
R (c)Close appropriate cargo compartment door (Ref. 52-30-00, P. Block
R 301).
R (d)Remove access platform.



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Toilet/Water Service Panels
Figure 601

WASTE WATER DRAIN - DESCRIPTION AND OPERATION

1. General
   The waste water drain system envelopes the drainage and disposal of waste water from lavatory compartment washbasins, and galley sinks.
2. Component Location

R **ON A/C 001-100,

(Ref. Fig. 001)

R **ON A/C 101-200,

R (Ref. Fig. 002)

R **ON A/C ALL

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
R **ON A/C 001-100,					
14DU	MAST-DRAIN (HEATED)-AFT		172		30-71-00
24DU	MAST-DRAIN (HEATED)-FWD		136		30-71-00
381811	DRAIN-SINK ASSEMBLY A		221		38-12-15
381812	DRAIN-SINK ASSEMBLY C		222		38-12-15
381814	DRAIN-SINK ASSEMBLY D		261		38-12-15
381815	DRAIN-SINK ASSEMBLY E		262		38-12-15
381816	DRAIN-SINK ASSEMBLY F		261		38-12-15
381817	DRAIN-SINK ASSEMBLY G		262		38-12-15
381928	DRAIN-SINK ASSEMBLY H		231		38-12-15
381932	DRAIN-SINK ASSEMBLY K		232		38-12-15
383504	VALVE-DRAIN A		221		38-32-11
383533	VALVE-DRAIN C		222		38-32-11
383534	VALVE-DRAIN D		261		38-32-11
383535	VALVE-DRAIN E		262		38-32-11
383536	VALVE-DRAIN F		261		38-32-11
383537	VALVE-DRAIN G		262		38-32-11
383742	VALVE-DRAIN H		231		38-32-11
383743	VALVE-DRAIN K		232		38-32-11
R **ON A/C 101-200,					

	FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
R	14DU	MAST-DRAIN (HEATED)-AFT		172		30-71-00
R	24DU	MAST-DRAIN (HEATED)-FWD		136		30-71-00
R	381810	DRAIN-SINK ASSEMBLY T		231		38-12-15
R	381811	DRAIN-SINK ASSEMBLY A		221		38-12-15
R	381813	DRAIN-SINK ASSEMBLY W		232		38-12-15
R	381926	DRAIN-SINK ASSEMBLY Y		261		38-12-15
R	381933	DRAIN-SINK ASSEMBLY Z		262		38-12-15
R	381934	DRAIN-SINK ASSEMBLY X		260		38-12-15
R	383500	VALVE-DRAIN Y		261		38-32-11
R	383503	VALVE-DRAIN Z		262		38-32-11
R	383504	VALVE-DRAIN A		221		38-32-11
R	383506	VALVE-DRAIN X		260		38-32-11
R	383746	VALVE-DRAIN T		231		38-32-11
R	383747	VALVE-DRAIN W		232		38-32-11

R **ON A/C ALL

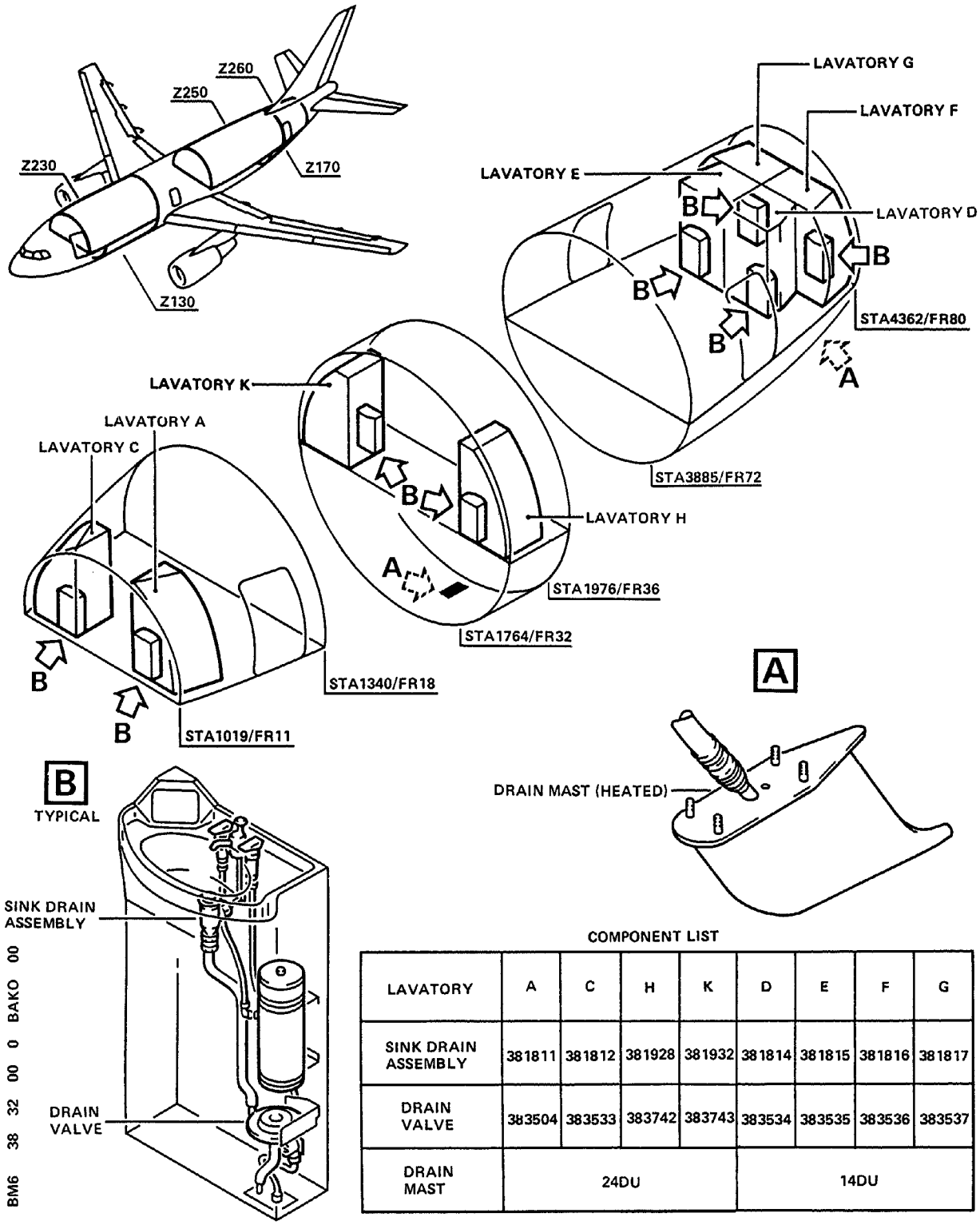
3. Description

(Ref. Fig. 003)

The waste water system consists of washbasin sink drain assemblies in lavatories and galleys, drain valves in the sanitary unit cabinets, drain lines and heated drain masts.

4. Operation

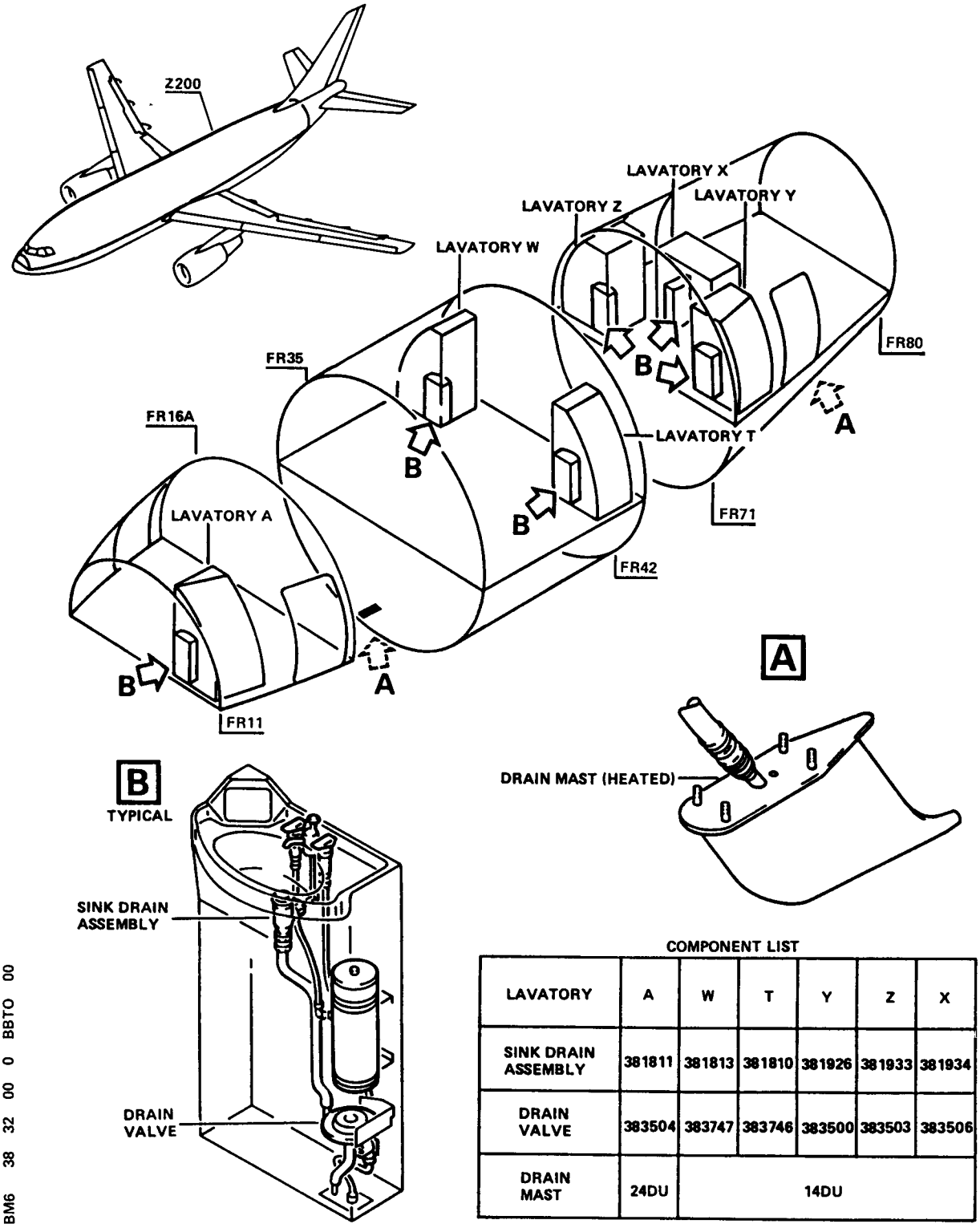
Waste water is disposed overboard via two heated drain masts installed on the lower shell of the fuselage. Transportation of waste water to the drain masts is achieved by a combination of gravity and cabin differential pressure. To prevent loss of cabin air via drain lines, drain valves are installed in the drain lines of the sanitary unit cabinets.



COMPONENT LIST

LAVATORY	A	C	H	K	D	E	F	G
SINK DRAIN ASSEMBLY	381811	381812	381928	381932	381814	381815	381816	381817
DRAIN VALVE	383504	383533	383742	383743	383534	383535	383536	383537
DRAIN MAST	24DU				14DU			

Component Location
Figure 001



COMPONENT LIST

LAVATORY	A	W	T	Y	Z	X
SINK DRAIN ASSEMBLY	381811	381813	381810	381926	381933	381934
DRAIN VALVE	383504	383747	383746	383500	383503	383506
DRAIN MAST	24DU	14DU				

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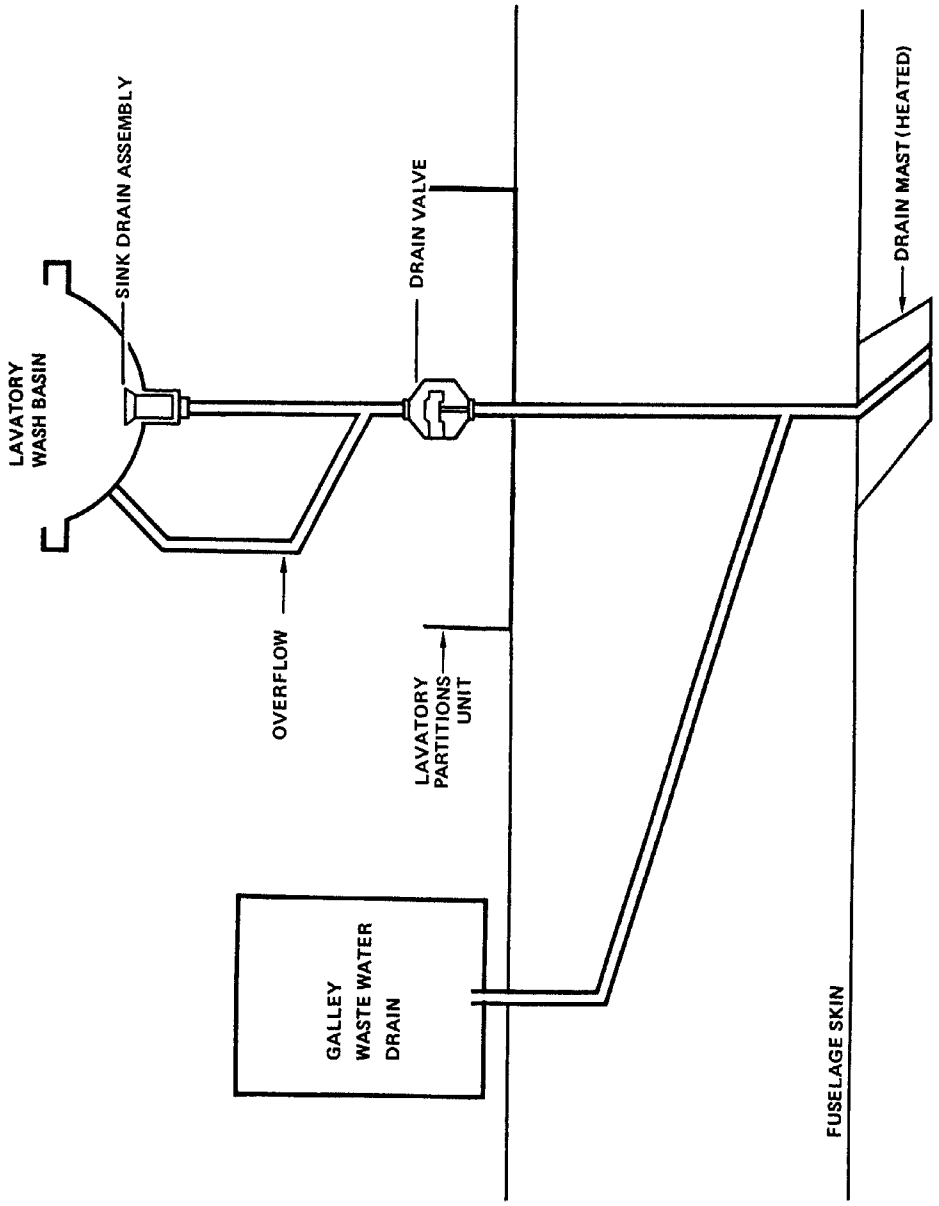
R Component Location
Figure 002



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Functional Diagram
Figure 003

WASTE WATER DRAIN - INSPECTION/CHECK

1. Reason for the Job

A. General visual inspection of waste water drain lines.

2. Equipment and Material

ITEM	DESIGNATION
A.	Access Platform 2,7 m (9 ft.)
B.	Light Source - Inspection
C.	Mirror - Inspection

Referenced Procedures

- 25-54-10, P. Block 201	FWD Cargo Compartment Linings
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment
R - 53-10-35, P. Block 401	Bulk Cargo Compartment Floor Panels

3. Procedure

A. Job Set-Up

(1)In sanitary unit cabinets, place all manual shutoff valves in the closed position.

(2)To gain access to forward and mid drain pipes proceed as follows:

(a)Position access platform under FWD cargo compartment door (Z811).

(b)Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-00, P. Block 301).

(c)Open avionics compartment doors (131AZ and 132AZ) to gain access to forward drain pipes.

(d)Remove appropriate FWD cargo compartment ceiling panels to gain access to mid drain pipes (Ref. 25-54-10, P. Block 201).

NOTE : If necessary, remove adjacent sidewall panels to gain additional access (Ref. 25-54-10, P. Block 201).

(3)To gain access to aft drain pipes, proceed as follows:

(a)Position access platform and open BULK cargo compartment door (Z813).

(b)Open access door (162AZ) to gain access to aft drain lines (Ref. 53-10-35, P. Block 401).

B. General Visual Inspection

(1)Visually examine the waste water drain lines for:

- damages
- leakage

NOTE : Leakage is not permissible.

- proper attachment.

C. Close-Up

(1)In FWD cargo compartment:
   (a)If removed, install FWD cargo sidewall panels (Ref. 25-54-10, P. Block 201).
R (b)Install FWD cargo compartment ceiling panels Ref. 25-54-10, P. Block 201).
   (c)Close avionics compartment doors (131AZ) and (132AZ).
   (d)Remove FWD cargo compartment safety lock and close FWD cargo compartment door (Z811) (Ref. 52-30-00, P. Block 301).
   (e)Remove access platform.
(2)In BULK cargo compartment:
   (a)Close access door (162AZ).
   (b)Close BULK cargo compartment door (Z813).
(3)Remove access platform.

WASTE WATER DRAIN - CLEANING/PAINTING

WARNING : ALWAYS WEAR RUBBER GLOVES, GOGGLES AND PROTECTIVE CLOTHING WHEN YOU DO THE CLEANING.

CAUTION : TO AVOID DAMAGE USE ONLY NON STEEL MATERIALS TO CLEAN THE DRAIN MAST TUBE.

1. Reason for the Job
   A. To rinse waste water drain line.
   B. To remove obstruction from drain mast tube.
   C. To flush out deposits from drain mast tube.

2. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.3 m (7,5 ft)
B.	Bottle Brush length ca. 500 to 600 mm (20 to 24 in.), diameter ca. 13 to 15 mm (0.5 to 0.6 in.)
R C.	Vinegar-essence

3. Procedure

   A. Cleaning of waste water drain line.

      (1)Job set-up
         (a)Position access platform under AFT drain mast (Z172).
      (2)Cleaning

      WARNING : ALWAYS WEAR RUBBER GLOVES, GOGGLES AND PROTECTIVE CLOTHING WHEN YOU DO THE CLEANING.

         (a)Cap FWD and AFT drain mast.
         (b)Fill waste line with a solution of 5% vinegar and 95% water from a corresponding lavatory or galley sink drain.
            NOTE : Make sure that overflow does not occur when filling.
         (c)Let solution take affect for one hour.
         (d)Check drain line connections for leakage.
         (e)Uncap FWD and AFT drain mast.
         (f)Drain waste line and flush with clear water.
      (3)Close-Up
         (a)Remove access platform.
         (b)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

   B. Cleaning of drain mast tube

      (1)Job set-up
         (a)Position access platform under AFT drain mast (Z172).

(2)Cleaning
  (a)AFT drain mast
    1 Brush inside of drain mast tube with bottle brush.
      NOTE: Use only bronze or hard plastic brush.
    2 Pour water into an AFT lavatory or Galley sink drain.
    3 Flush waste drain line until water is clear.
  (b)FWD drain mast
    1 Brush inside of drain mast tube with bottle brush.
      NOTE: Use only bronze or hard plastic brush.
    2 Pour water into a FWD lavatory or Galley sink drain.
    3 Flush waste drain line until water is clear.
(3)Close-Up
  (a)Remove access platform.
  (b)Make certain that working area is clean and clear of tools and
     miscellaneous items of equipment.

1. Not applicable

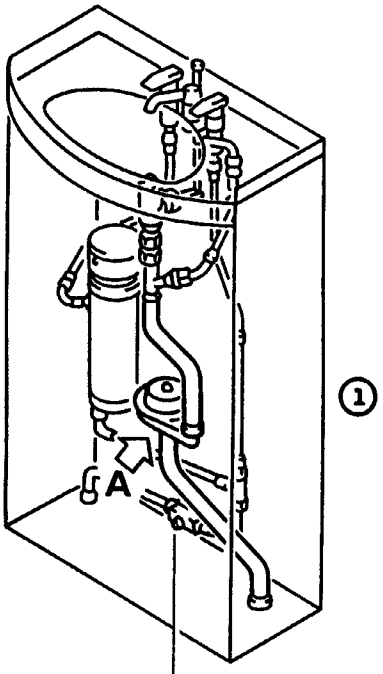
2. Procedure
(Ref. Fig. 401)

A. Job Set-Up
(1)Open appropriate sanitary unit cabinet door.
(2)Switch off water heater.
(3)Place manual shutoff valve in closed position.
(4)Activate water faucet and allow water to drain.

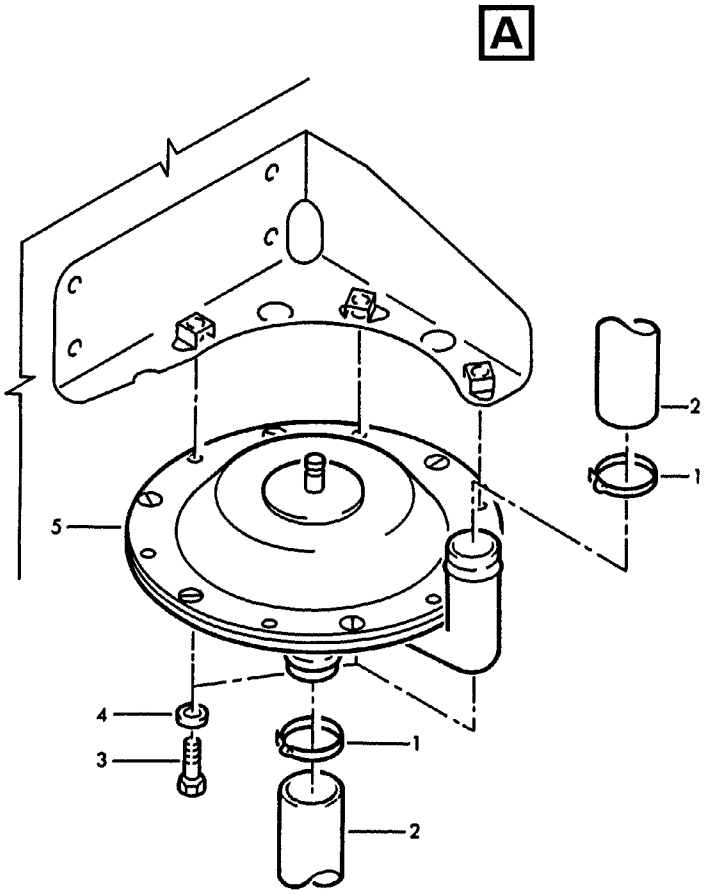
B. Removal
(1)Release clamps (1) and disconnect hoses (2).
(2)Remove bolts (3), washers (4) and float valve (5).

C. Installation
(1)Install float valve (5) and secure with washers (4) and bolts (3).
(2)Connect hoses (2) and secure with clamps (1).

D. Close-Up
(1)Place manual shutoff valve in open position and close sanitary unit cabinet door.
(2)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.



(1)



(1) TYPICAL LAYOUT

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Float Valve
Figure 401

WASTE WATER DRAIN LINE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.7 m (9 ft).

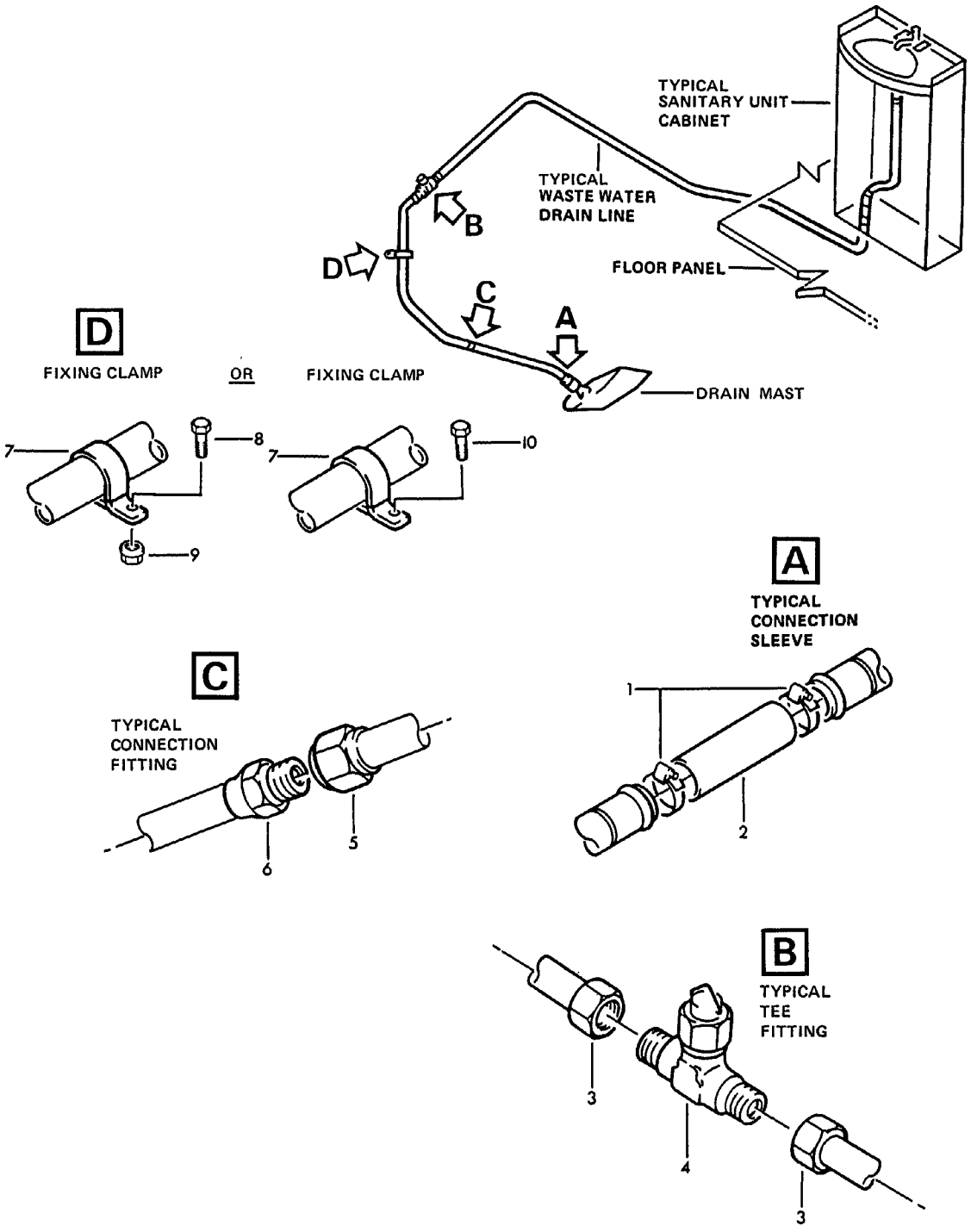
Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 25-54-10, P. Block 201	FWD Cargo Compartment Linings
- 38-40-00, P. Block 301	Air Supply
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
- 53-10-29, P. Block 401	FWD Cargo Compartment Floor Panels
- 53-10-35, P. Block 401	BULK Cargo Compartment Floor Panels

2. Procedure

A. Job Set-Up
(1) In sanitary unit cabinets, place all manual shutoff valves in the closed position.
(2) To gain access to forward and mid drain lines or forward drain mast, proceed as follows:
(a) Position access platform under FWD cargo compartment door (Z 811).
(b) Open FWD cargo compartment door (Z 811) and secure with safety lock (Ref. 52-30-00, P. Block 301).
(c) Open avionics compartment doors (131AZ) and (132AZ) to gain access to forward drain lines.
(d) Remove appropriate FWD cargo compartment ceiling panels to gain access to mid drain lines (Ref. 25-54-10, P. Block 201).
NOTE : If necessary, remove adjacent sidewall panels to gain additional access (Ref. 25-54-10, P. Block 201).
(e) Remove appropriate FWD cargo compartment floor panels to gain access to forward drain mast connection (Ref. 53-10-29, P. Block 401).
(3) To gain access to aft drain lines and aft drain mast, proceed as follows:
(a) Position access platform and open BULK cargo compartment door (Z 813).
(b) Open BULK cargo compartment door (162AZ) to gain access to aft drain lines.
(c) Remove appropriate BULK cargo compartment floor panels to gain access to drain mast (Ref. 53-10-35, P. Block 401).

B. Removal
(Ref. Fig. 401)
(1) Remove bolts (8), nuts (9) or bolts (10).
(2) Release fixing clamps (7), attaching drain lines to brackets.
(3) Release clamps (1) and remove sleeve (2).
(4) Disconnect unions (3) at T-piece (4).
(5) Disconnect union (5) at end fitting (6).
(6) Disassemble drain lines.



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Waste Water Drain Line
Figure 401

C. Preparation for Installation
(1)Make certain that installation area is clean and clear of tools and miscellaneous items of equipment.

D. Installation (Ref. Fig. 401).
(1)Assemble drain lines.
(2)Install sleeve (2) and secure with clamps (1).
NOTE : Make certain that sleeves are fitted up to color markings on drain line.
(3)Connect unions (3) at T-piece (4).
(4)Secure drain lines to brackets with clamps (7), install nuts (9), bolts (8) or bolts (10).
(5)Connect union (5) at end fitting (6).
(6)In all sanitary unit cabinets, place all manual shutoff valves in the open position.

E. Test
(1)Replenish potable water system (Ref. 12-15-38, P. Block 1).
(2)Pressurise water system (Ref. 38-40-00, P. Block 300).
(3)Open manual shutoff valves.
(4)Check waste water drain lines for leakage.
(a)Temporarily cap and seal appropriate drain mast.
(b)Open an appropriate lavatory or galley water faucet and allow drain line to fill.
(c)Close water faucet in appropriate lavatory or galley and check drain line connections for leakage.
NOTE : Leakage is not permissible.
(d)Remove sealed cap from drainmast and allow water to drain into an appropriate container.

F. Close-Up
(1)In FWD cargo compartment:
(a)Install FWD cargo compartment floor panels (Ref. 53-10-29, P. Block 401).
(b)If removed, install FWD cargo compartment sidewall panels (Ref. 25-54-10, P. Block 201).
(c)Install FWD cargo compartment ceiling panels (Ref. 24-54-10, P. Block 201).
(d)Close avionics compartment doors (131AZ) and (132AZ).
(e)Remove FWD cargo compartment safety lock and close FWD cargo compartment door (Z 811) (Ref. 52-30-00, P. Block 301).
(f)Remove access platform.
(2)In BULK cargo compartment:
(a)Install BULK cargo compartment floor panels (Ref. 53-10-35, P. Block 401).
(b)Close BULK cargo compartment access door (162AZ).
(c)Close BULK cargo compartment door (Z 813).
(3)Remove access platform.
(4)Replenish potable water system as required (Ref. 12-15-38, P. Block 1).

VACUUM TOILET SYSTEM - DESCRIPTION AND OPERATION

1. General

Two vacuum toilet systems (L/H and R/H) are provided for passenger and crew convenience.

The toilets are flushed with water from the aircraft pressurized potable water system.

Removal of waste matter from the toilet bowls into waste tanks is achieved by vacuum draining.

The above floor installation of the system includes flush switches, the toilet assemblies and flush control units.

The underfloor installation of each system includes waste tank assembly, vacuum blower assembly, check valves, logic control unit, level sensors, waste system dump valve and waste piping.

In addition, the system consists of a limit switch installed on the waste service panel and an altitude pressure switch installed in the nonpressurized zone of the aft section.

2. Component Location

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
12MG	CONTACTOR - R/H SYSTEM		260		
13MG	ALTITUDE PRESSURE SWITCH R/H		312	312AR	38-35-35
14MG	LIMIT SWITCH	863VU	221		
15MG	SWITCH PUSHBUTTON	863VU	221		
16MG	VACUUM BLOWER R/H		170	162AZ	38-35-15
17MG	RELAY - R/H	800VU	223		
18MG	LOGIC CONTROL UNIT R/H		170	162AL	38-35-31
19MG	SENSOR A - WASTE LEVEL R/H		170	162AL	38-35-32
20MG	SENSOR B - WASTE LEVEL R/H		170	162AL	38-35-32
21MG	SENSOR C - WASTE LEVEL R/H		170	162AL	38-35-32

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
112MG	CONTACTOR - L/H SYSTEM		260		
113MG	ALTITUDE PRESSURE SWITCH L/H		312	312AR	38-35-35
114MG	LIMIT SWITCH	863VU	221		
115MG	SWITCH PUSHBUTTON	863VU	221		
116MG	VACUUM BLOWER L/H		170	162AZ	38-35-15
117MG	RELAY - L/H	800VU	223		
118MG	LOGIC CONTROL UNIT L/H		170	162AL	38-35-31
119MG	SENSOR A - WASTE LEVEL L/H		170	162AL	38-35-32
120MG	SENSOR B - WASTE LEVEL L/H		170	162AL	38-35-32
121MG	SENSOR C - WASTE LEVEL L/H		170	162AL	38-35-32
384200	WASTE TANK - L/H		171	162AL	38-35-17
384201	WASTE TANK - R/H		171	162AL	38-35-17
384205	CHECK VALVE - VENT LINE L/H		171	162AL	38-35-21
384206	CHECK VALVE - VENT LINE R/H		171	162AL	38-35-21

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
384260	VALVE TACO		171	162AL	38-35-39
1	WATER/WASTE SERVICE PANEL		171	171AL	

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384200	WASTE TANK - L/H		171	162AL	38-35-17
384201	WASTE TANK - R/H		171	162AL	38-35-17
384205	CHECK VALVE - VENT LINE L/H		171	162AL	38-35-21
384206	CHECK VALVE - VENT LINE R/H		171	162AL	38-35-21
384260	VALVE SHAW		171	162AL	38-35-39
1	WATER/WASTE SERVICE PANEL		171	171AL	

R **ON A/C 001-100,

Lavatory A					
1MG5	FLUSH SWITCH		221		
2MG5	FLUSH CONTROL UNIT		221		38-35-33
3MG5	WATER VALVE		221		38-35-37
4MG5	FLUSH VALVE		221		38-35-27
384160	TOILET UNIT		221		38-35-13
Lavatory C					
1MG8	FLUSH SWITCH		222		
2MG8	FLUSH CONTROL UNIT		222		38-35-33
3MG8	WATER VALVE		222		38-35-37
4MG8	FLUSH VALVE		222		38-35-27
384161	TOILET UNIT		222		38-35-13
Lavatory H					
1MG9	FLUSH SWITCH		241		
2MG9	FLUSH CONTROL UNIT		241		38-35-33
3MG9	WATER VALVE		241		38-35-37
4MG9	FLUSH VALVE		241		38-35-27
384171	TOILET UNIT		241		38-35-13
Lavatory K					
1MG13	FLUSH SWITCH		231		
2MG13	FLUSH CONTROL UNIT		231		38-35-33
3MG13	WATER VALVE		231		38-35-37
4MG13	FLUSH VALVE		231		38-35-27
384172	TOILET UNIT		231		38-35-13
Lavatory D					
101MG7	FLUSH SWITCH		262		
102MG7	FLUSH CONTROL UNIT		262		38-35-33
103MG7	WATER VALVE		262		38-35-37
104MG7	FLUSH VALVE		262		38-35-27
384176	TOILET UNIT		262		38-35-13

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
Lavatory E					
101MG8	FLUSH SWITCH		261		
102MG8	FLUSH CONTROL UNIT		261		38-35-33
103MG8	WATER VALVE		261		38-35-37
104MG8	FLUSH VALVE		261		38-35-27
384177	TOILET UNIT		261		38-35-13
Lavatory F					
101MG9	FLUSH SWITCH		262		
102MG9	FLUSH CONTROL UNIT		262		38-35-33
103MG9	WATER VALVE		262		38-35-37
104MG9	FLUSH VALVE		262		38-35-27
384178	TOILET UNIT		262		38-35-13
Lavatory G					
101MG10	FLUSH SWITCH		261		
102MG10	FLUSH CONTROL UNIT		261		38-35-33
103MG10	WATER VALVE		261		38-35-37
104MG10	FLUSH VALVE		261		38-35-27
384179	TOILET UNIT		261		38-35-13

(Ref. Fig. 001)
(Ref. Fig. 002)

R **ON A/C 001-100,

R Post SB 38-2026 For A/C 001-100,

(Ref. Fig. 003)

R **ON A/C 001-100,

3. Description

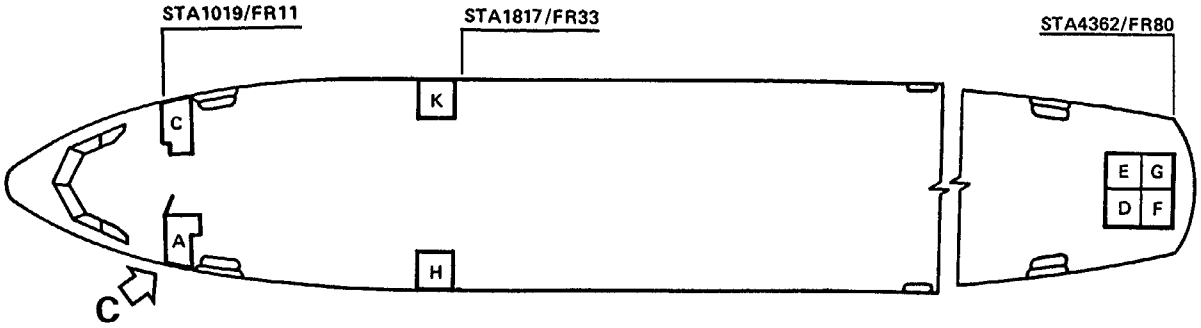
Each vacuum toilet assembly is a self-contained, free standing unit, bolted to the lavatory floor and connected to plumbing and wiring.
One is installed in each lavatory compartment and comprise:

A. Toilet Unit

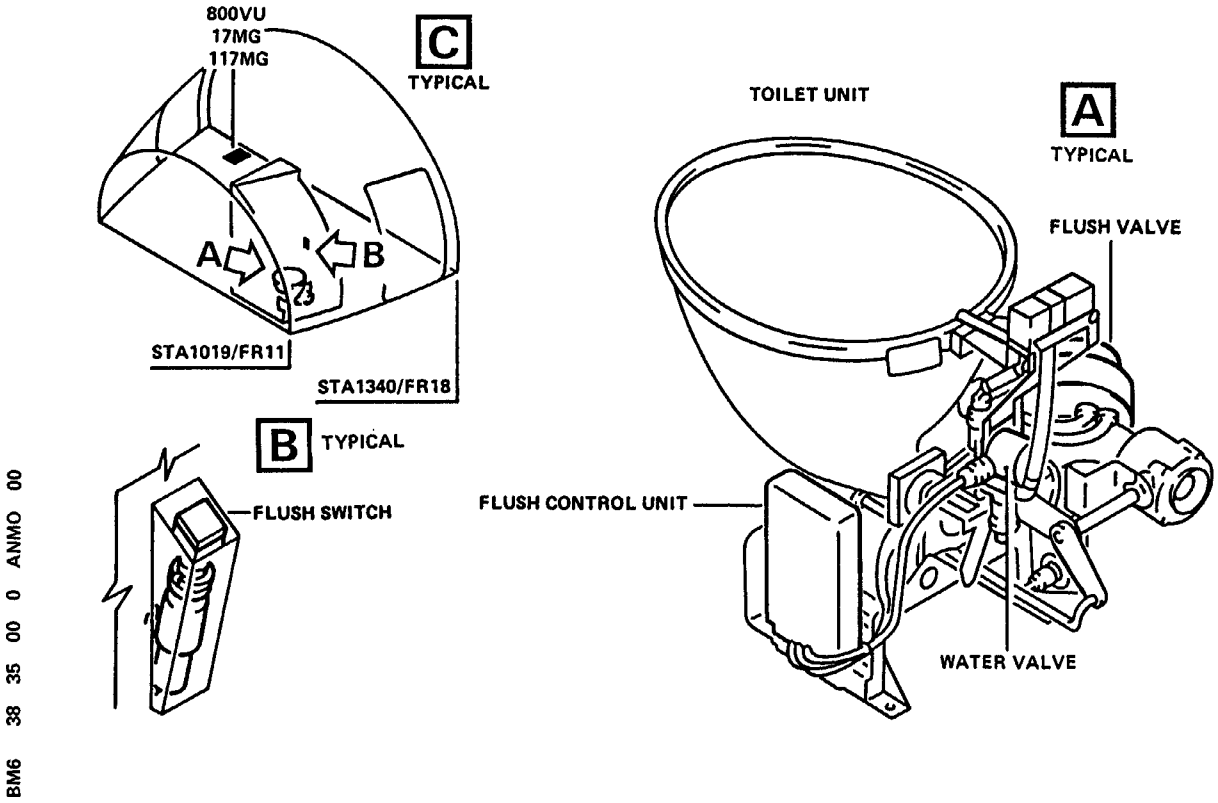
(1)Toilet Bowl and Spray Ring

(Ref. Fig. 004)

The toilet bowl is elliptically shaped on top and contoured with steep sloping sides with a waste exit hole of 1.75 inches (44.45 mm) diameter. It is made of stainless steel with an abrasive resistant, nonstick, nonwetting coating. The spray ring is attached to the top of the bowl and anti-siphon valve.



LAVATORY	A	C	H	K	D	E	F	G
TOILET UNIT	384160	384168	384171	384172	384177	384176	384178	384179
FLUSH SWITCH	1MG5	1MG8	1MG9	1MG13	101MG7	101MG8	101MG9	101MG10
FLUSH CONTROL UNIT	2MG5	2MG8	2MG9	2MG13	102MG7	102MG8	102MG9	102MG10
WATER VALVE	3MG5	3MG8	3MG9	3MG13	103MG7	103MG8	103MG9	103MG10
FLUSH VALVE	4MG5	4MG8	4MG9	4MG13	104MG7	104MG8	104MG9	104MG10



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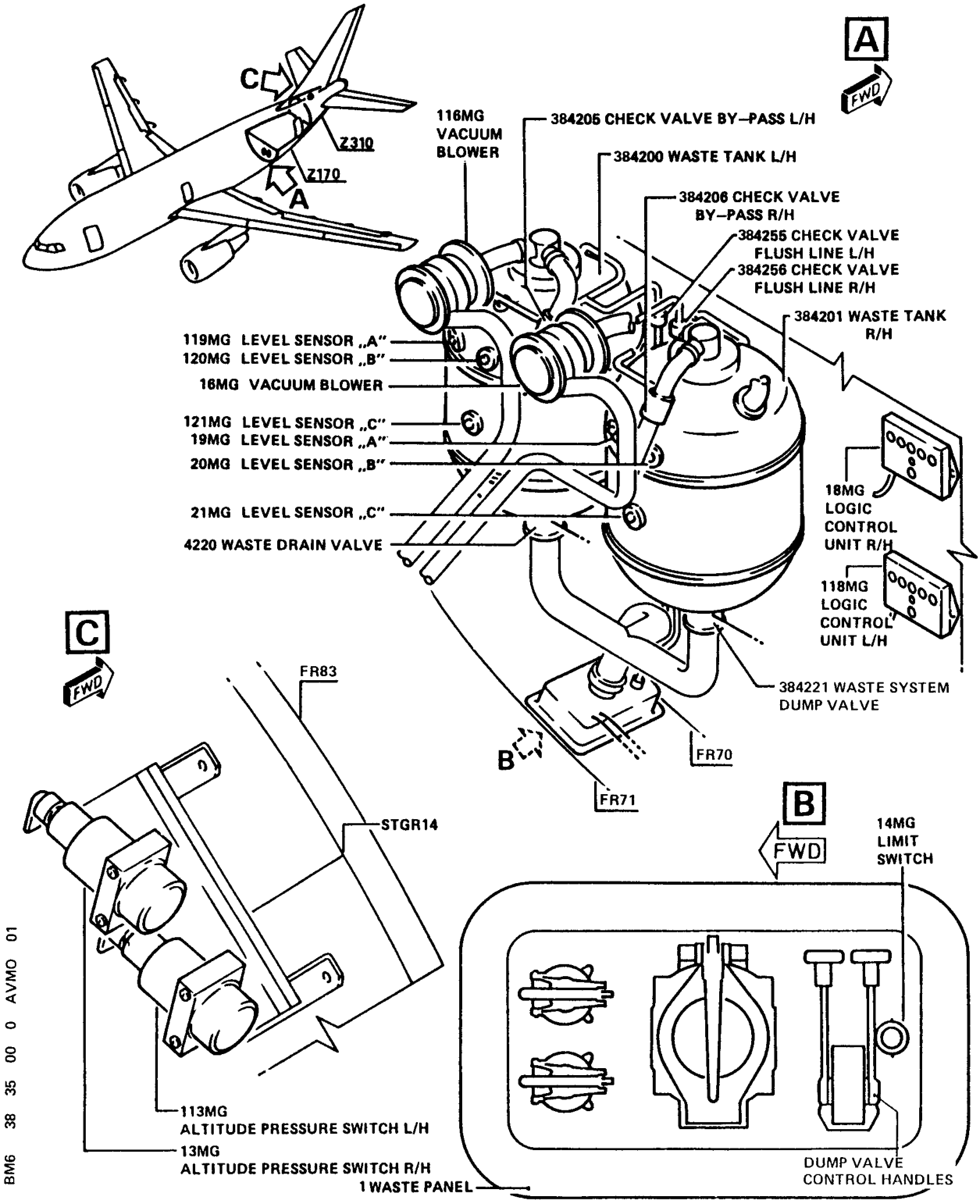
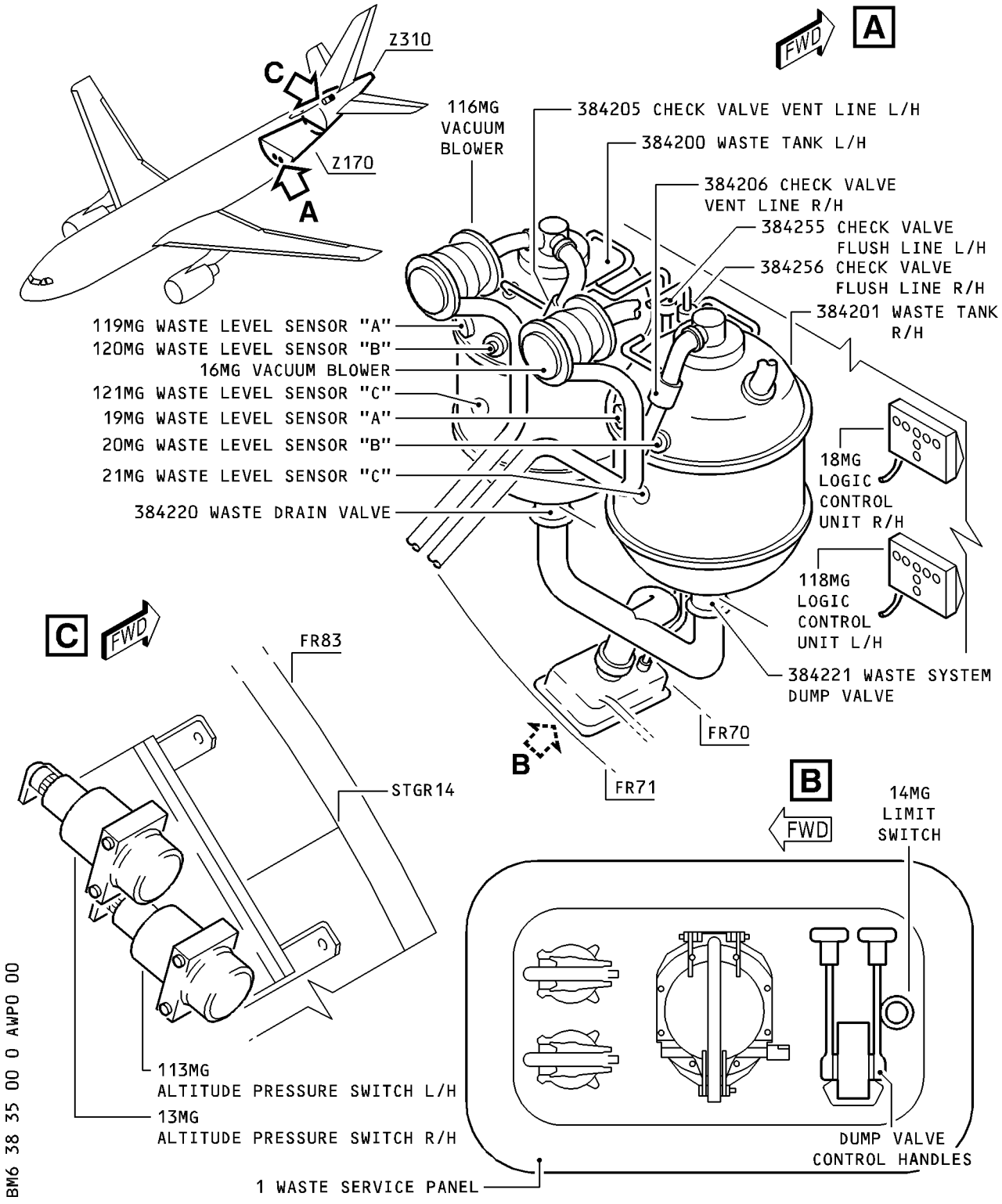
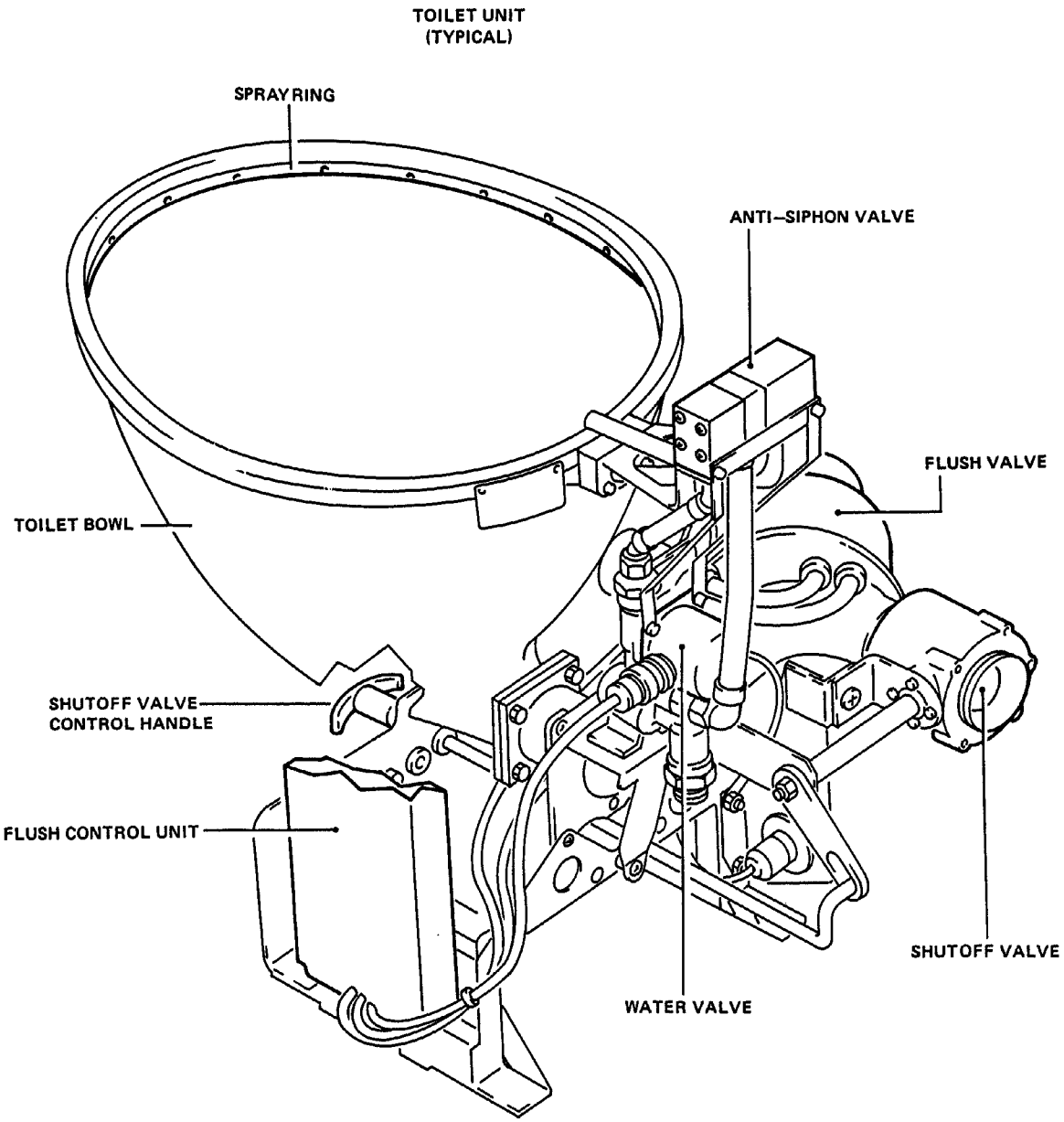
Component Location
Figure 001



Component Location
Figure 002



Component Location
Figure 003



Vacuum Toilet Unit
Figure 004

(2)Water Control Module
The water control module is self-contained and comprise:
- Water Valve (solenoid controlled).
  When energized, the water valve opens and allows water to flow into the toilet bowl. The outlet of the valve is connected to the anti-siphon valve. The water valve is connected to and controlled by the flush control unit.
- Strainer
  The replaceable finger strainer inhibits lime scale and other impurities clogging the valves and spray ring.

(3)Anti-Siphon Valve
The anti-siphon valve prevents entry of contaminated water into the potable water line by returning any excess splash or backup water into the toilet bowl. It is installed above the toilet bowl.

(4)Flush Valve and Shutoff Valve
The flush valve is a self-contained, solenoid controlled unit.
It is plumbed to the toilet bowl outlet and electrically connected to the flush control unit. When energized by the flush control unit, it opens to allow passage of waste matter.
The shutoff valve is installed in the toilet waste line, next to the flush valve. When operated it isolates the toilet unit from vacuum lavatory system.
A push-pull handle (in front of the toilet assembly) operates the shutoff valve.

(5)Flush Switch
The flush switch is a momentary type, actuated by a button.

B. Waste Tank Assembly
The waste tank assembly is located below the cabin floor in the rear section (FR.71) of the aircraft and comprise:
- Waste Tank and Waste Level Sensors
- Water Separator
- Check Valve Flush Line
- Check Valve Vent Line
- Waste Inlet
- Rinse Assembly
- Waste Drain Connection and Waste Service Panel

(1)Waste Tank
The waste tank is a metallic-lined, filament wound, cylindrical vessel with end domes, and polar inlets and outlets. It has a useable capacity of 265 l (70 US gal.) and a total capacity of 328 l (87 US gal.). There is an access hole for interior cleaning and inspection.

(2)Water Separator
The water separator prevents any moisture or foam (formed by the incoming waste matter which could damage the vacuum blower) from entering the overboard vent line.
It is located inside and mounted to the top of the waste tank.
The water separator is a self-cleaning unit with no moving parts and can be removed/installed without removal of the waste tank.

(3)Check Valve - Flush Line
It is installed in the waste tank flush line and allows water to flow only into the waste tank.

(4)Vacuum Blower
The vacuum blower, when energized by the flush control unit, creates a negative pressure difference of 1 to 6 psi (0.07 to 0.42 bar) in the waste tank at sea level static condition and up to 16.000 ft. (max.) altitude. The vacuum blower is a radial flow type with an air cooled motor, connected to the waste tank and the overboard vent line by a 2.5 inch nom. I.D. inlet line and a 2.25 inch nom. I.D. differential line.

(5)Check Valve - Vent Line
It is installed in the overboard vent line and prevents ambient pressure entering the vacuum system.

(6)Waste Inlet
There are two waste inlet connections on the upper dome of the waste tank. The LH inlet pipe is for the forward, the RH for the aft lavatories.
The waste inlet connections, 2-inch nom. I.D. are designed to avoid clogging and the possibility of waste matter damaging the waste tank on high velocity entry.

(7)Rinse Assembly
The rinse assembly consists of two fittings located on the upper dome of the waste tank and a device within the waste tank. Flush/rinse connection points are at the waste service panel.

(8)Waste Drain Connection and Waste Service Panel
The waste drain connection is located on the lower dome. The waste tank outlet drain pipe is connected to the waste system dump valve and then plumbed to a common outlet with a TACO-valve at the waste service panel.
The waste system dump valve is operated by a control cable.
At the waste service panel, located between frames 70 and 71, there are two dump valve control handles, one for each system, two flush/rinse ports, one for each waste tank and one waste drain port.

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(8)Waste Drain Connection and Waste Service Panel
The waste drain connection is located on the lower dome. The waste tank outlet drain pipe is connected to the waste system dump valve and then plumbed to a common outlet with a SHAW-valve at the waste service panel.
The waste system dump valve is operated by a control cable.
At the waste service panel, located between frames 70 and 71, there are two dump valve control handles, one for each system, two flush/rinse ports, one for each waste tank and one waste drain port.

R **ON A/C 001-100,

C. System Control

(1)Logic Control Unit

The logic control unit is an electronic assembly which controls the timing and event sequences of flush control unit, waste level sensors, vacuum blower and altitude pressure switch.

It computes: - Level sensor signals
- Flush control unit signals
- Altitude pressure switch signal
- Waste tank FULL signal.

The logic control unit is equipped with built-in test lights and a switch to check the status of waste level sensors i.e. operational or not-operational.

There is one logic control unit for each system and mounted to frame 70 next to the waste tanks.

(2)Level Sensors

Three waste level sensors are fitted to each tank. The upper two (Level Sensor 'A' and Level Sensor 'B') are for tank FULL signal. System shut-down occurs if either one detects tank FULL. The tank full level is defined as the level reached at the useable capacity of 265 l (70 US gal.).

A third level sensor (Level Sensor 'C') is installed at approximately 2/3 full level. The design objective includes the 2/3 full sensor in the decision logic for system shutdown control.

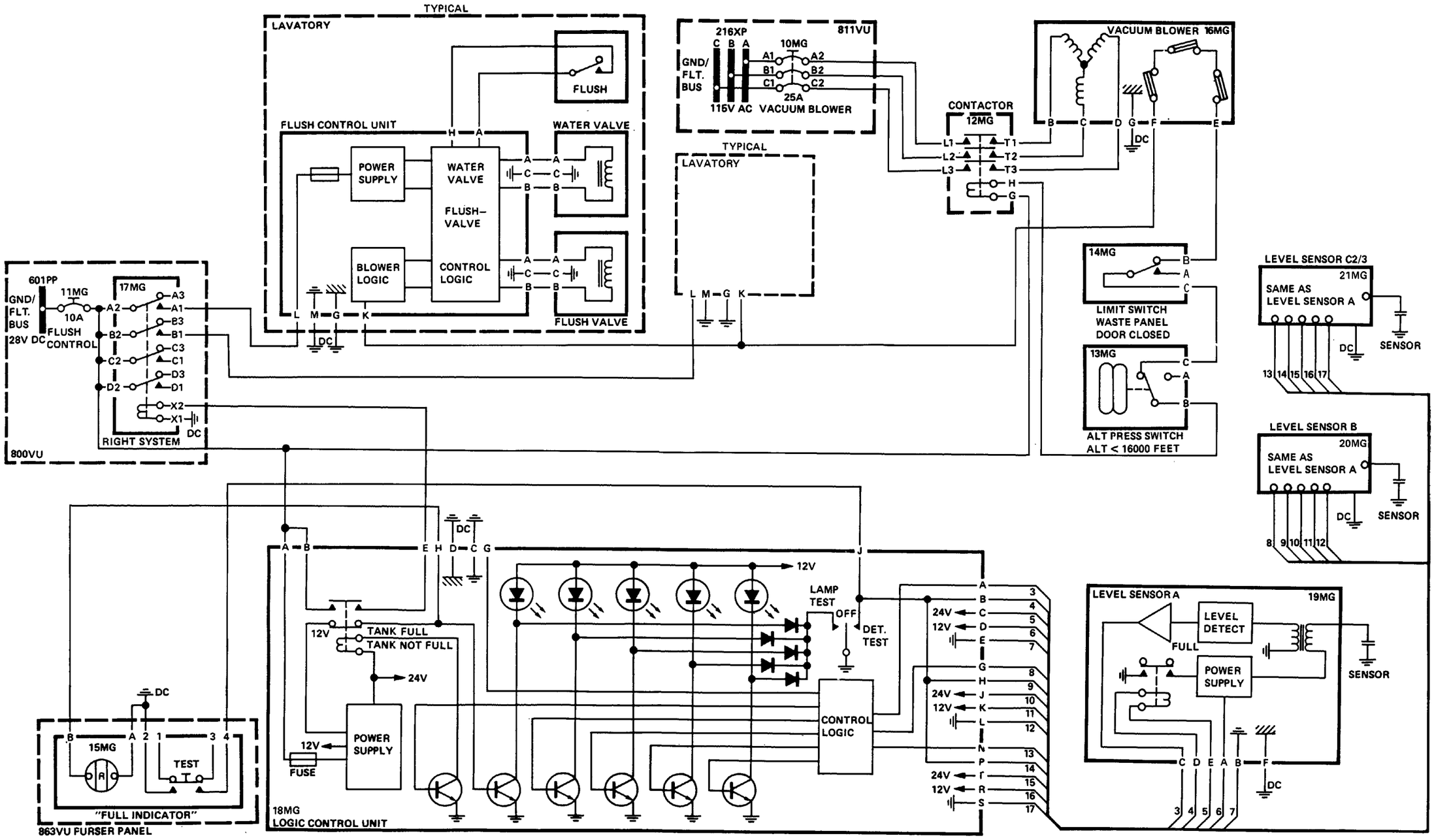
(3)Flush Control Unit

The flush control unit is an electronic assembly which controls the timing and event sequences of the flush cycle. One is installed in each toilet unit and computes the following electrical signals:

- Flush switch signal
- Water valve signal
- Flush valve signal
- Switched vacuum blower signal.

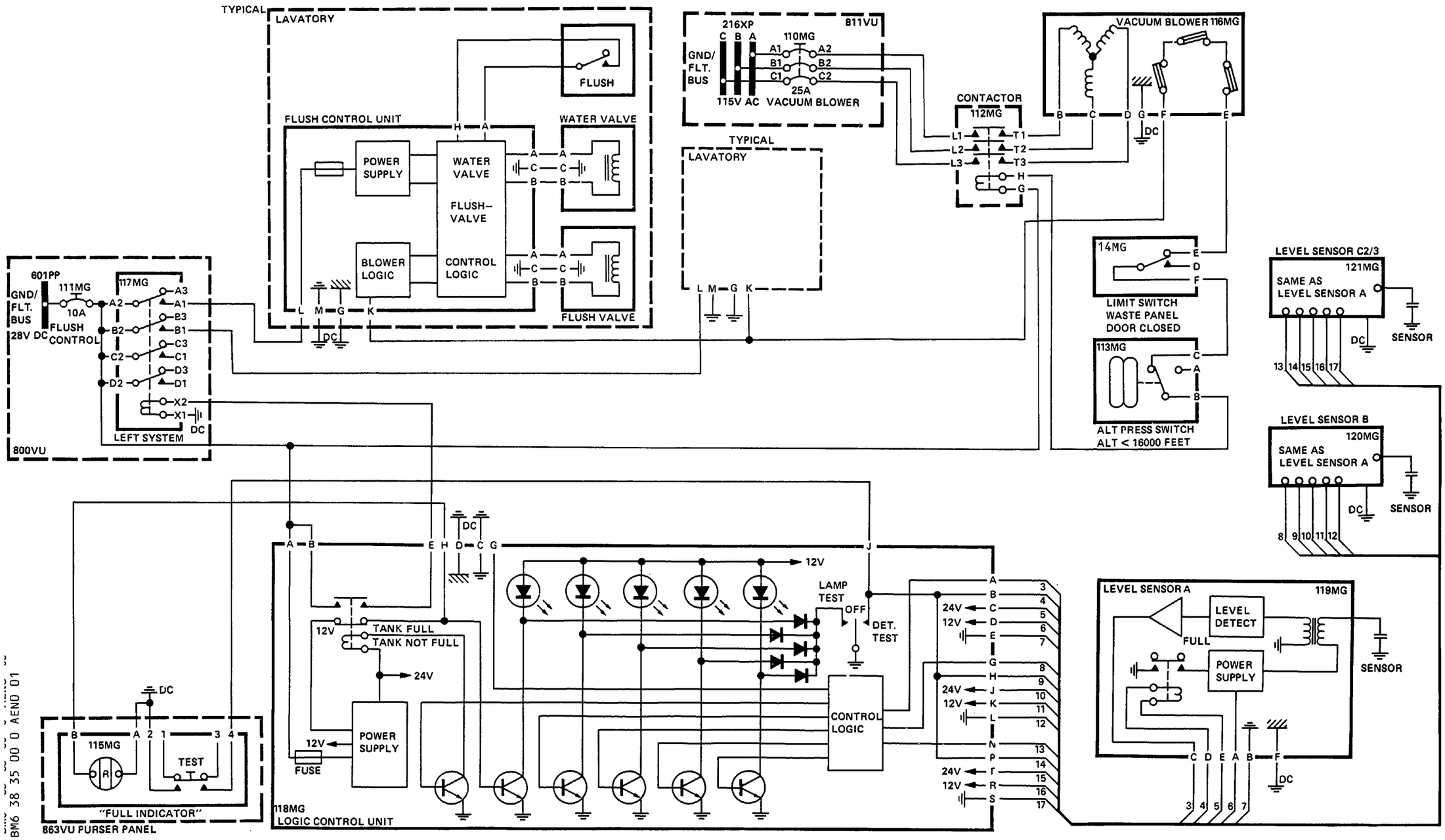
(4)Altitude Pressure Switch

Two altitude pressure switches, one for each system, are mounted at frame 83 and switch 'ON' or 'OFF' the power supply to the vacuum blower. The power supply to the vacuum blower is 'ON' on ground and up to 16.000 ft. altitude. Above 16.000 ft. altitude, the power is 'OFF'. (Ref. Fig. 005, 006)



BM6 38 35 00 0 ACND 01

Electrical Schematic - R/H
Figure 005



Electrical Schematic - L/H
Figure 006

4. Operation

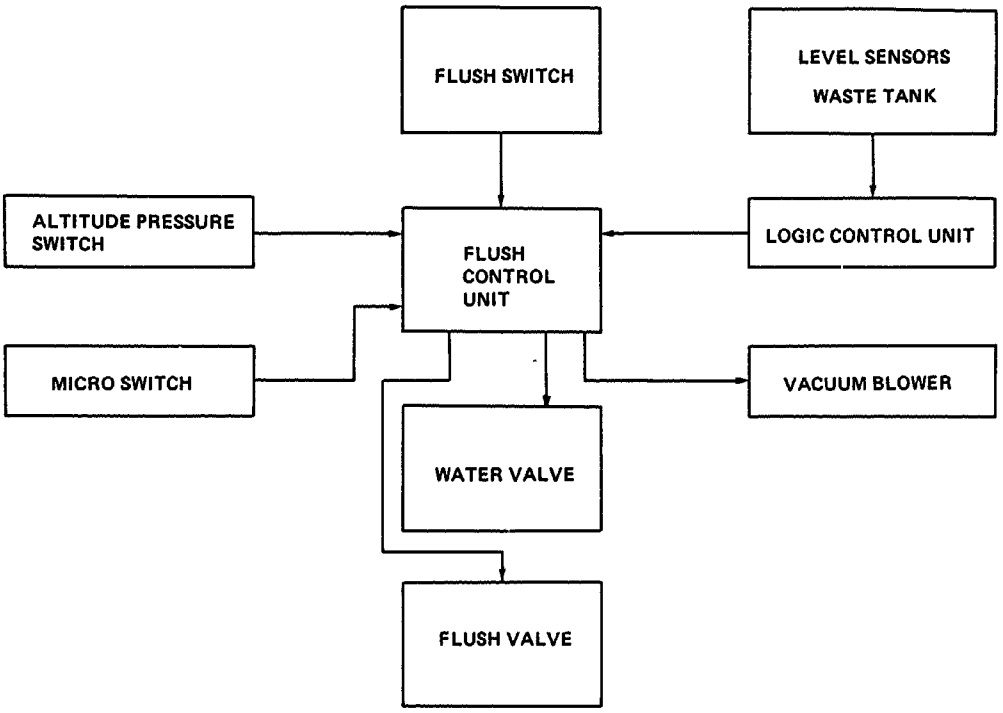
A. Flush Control Unit
(Ref. Fig. 007)
Upon actuation of the toilet flush switch, the flush control unit receives an electrical signal and controls the following steps:
- activating the vacuum blower directly, from 0 ft. up to 16.000 ft. (4876.9 m) altitude only; the input for this information is given by the altitude pressure switch. Above 16.000 ft. (4876.9 m) the vacuum blower is off and the system functions with the cabin to ambient pressure differential. In this case, the air is led through the by-pass line via the vent line check valve, apart from this the flush cycle remains unchanged.
- after a delay of one second, it opens the water valve for one second to discharge a water quantity of 0.18 - 0.206 l (0.048 - 0.055 US gal.).
- 2 seconds after starting the cycle, it opens the flush valve for 4 seconds to rinse waste matter with water supplied from the water valve.
- The cycle duration is 15 seconds after pressing the flush switch. A re-start of the flush cycle within this time is inhibited.

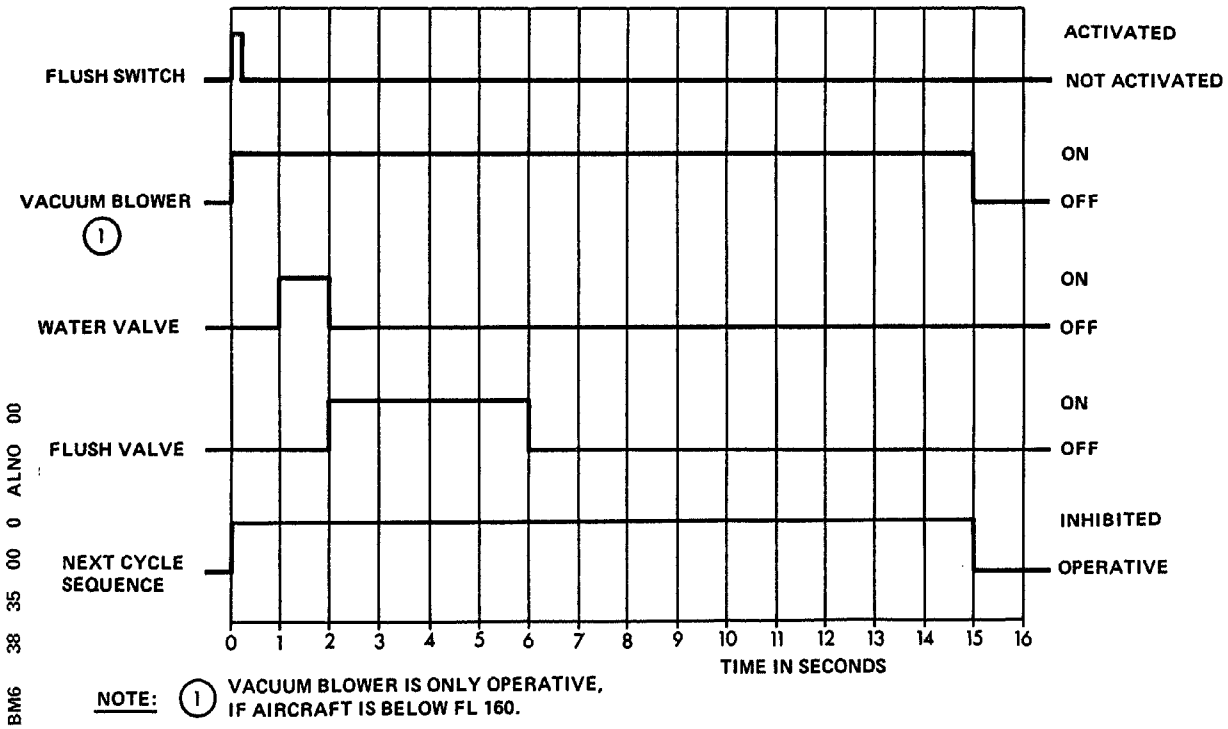
B. Logic Control Unit
The logic control unit performs the following control functions:
- checks and compares the signals from the waste level sensors. When either one of the full level sensors detects a tank FULL, it initiates an electrical signal from the flush switches to the logic control unit to inhibit further flushing of the toilets belonging to the particular system (system shut down).
- computes the signals from the waste level sensors and provides output signals to the purser's panel for '2/3' and 'FULL' (if installed) tank waste level indication.
- when a flush signal is received from a flush control unit, it disables all other flush control units of the system for 5 seconds.

C. Waste Tank Draining and Flushing
During servicing, a toilet servicing vehicle is connected to the flush and drain connection points at the service panel. The spring loaded TACO valve and the waste system dump valves are opened and the waste tanks drained. When empty, they require to be flushed with water.
The water pressure must not exceed 50 psi. (3.45 bar).
When the flushing procedure is completed, the valves are closed.

R **ON A/C 001-100,

R Post SB 38-2026 For A/C 001-100,





Functional Diagram
Figure 007

C. Waste Tank Draining and Flushing
During servicing, a toilet servicing vehicle is connected to the flush and drain connection points at the service panel. The spring loaded SHAW valve and the waste system dump valves are opened and the waste tanks drained. When empty, they require to be flushed with water.
The water pressure must not exceed 50 psi. (3.45 bar).
When the flushing procedure is completed, the valves are closed.

VACUUM TOILET SYSTEM - DESCRIPTION AND OPERATION

1. General

Two vacuum toilet systems (L/H and R/H) are provided for passenger and crew convenience.

The toilets are flushed with water from the aircraft pressurized potable water system.

Removal of waste matter from the toilet bowls into waste tanks is achieved by vacuum draining.

The above floor installation of the system includes flush switches, the toilet assemblies and flush control units.

The underfloor installation of each system includes waste tank assembly, vacuum blower assembly, check valves, logic control unit, level sensors, waste system dump valve and waste piping.

In addition, the system consists of a limit switch installed on the waste service panel and an altitude pressure switch installed in the nonpressurized zone of the aft section.

R **ON A/C 101-102, 104-105, 107-200,

2. Component Location (Ref. Fig. 001)

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
12MG	CONTACTOR - R/H SYSTEM		260		
13MG	ALTITUDE PRESSURE SWITCH R/H		312	312AR	38-35-35
14MG	LIMIT SWITCH	863VU	221		
15MG	SWITCH PUSHBUTTON	863VU	221		
16MG	VACUUM BLOWER R/H		170	162AZ	38-35-15
17MG	RELAY - R/H	800VU	223		
18MG	LOGIC CONTROL UNIT R/H		170	162AL	38-35-31
19MG	SENSOR A - WASTE LEVEL R/H		170	162AL	38-35-32
20MG	SENSOR B - WASTE LEVEL R/H		170	162AL	38-35-32
21MG	SENSOR C - WASTE LEVEL R/H		170	162AL	38-35-32
112MG	CONTACTOR - L/H SYSTEM		260		
113MG	ALTITUDE PRESSURE SWITCH L/H		312	312AR	38-35-35
114MG	LIMIT SWITCH	863VU	221		
115MG	SWITCH PUSHBUTTON	863VU	221		
116MG	VACUUM BLOWER L/H		170	162AZ	38-35-15
117MG	RELAY - L/H	800VU	223		
118MG	LOGIC CONTROL UNIT L/H		170	162AL	38-35-31
119MG	SENSOR A - WASTE LEVEL L/H		170	162AL	38-35-32
120MG	SENSOR B - WASTE LEVEL L/H		170	162AL	38-35-32
121MG	SENSOR C - WASTE LEVEL L/H		170	162AL	38-35-32
384200	WASTE TANK - L/H		171	162AL	38-35-17
384201	WASTE TANK - R/H		171	162AL	38-35-17
384205	CHECK VALVE - VENT LINE L/H		171	162AL	38-35-21
384206	CHECK VALVE - VENT LINE R/H		171	162AL	38-35-21
384260	VALVE TACO		171	162AL	38-35-39
1	WATER/WASTE SERVICE PANEL		171	171AL	

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
Lavatory A					
1MG5	FLUSH SWITCH		221		
2MG5	FLUSH CONTROL UNIT		221		38-35-33
3MG5	WATER VALVE		221		38-35-37
4MG5	FLUSH VALVE		221		38-35-27
384160	TOILET UNIT		221		38-35-13
Lavatory T					
1MG7	FLUSH SWITCH		241		
2MG7	FLUSH CONTROL UNIT		241		38-35-33
3MG7	WATER VALVE		241		38-35-37
4MG7	FLUSH VALVE		241		38-35-27
384166	TOILET UNIT		241		38-35-13
Lavatory W					
1MG6	FLUSH SWITCH		242		
2MG6	FLUSH CONTROL UNIT		242		38-35-33
3MG6	WATER VALVE		242		38-35-37
4MG6	FLUSH VALVE		242		38-35-27
384167	TOILET UNIT		242		38-35-13
Lavatory X					
	FLUSH SWITCH		252		
	FLUSH CONTROL UNIT		252		38-35-33
	WATER VALVE		252		38-35-37
	FLUSH VALVE		252		38-35-27
	TOILET UNIT		252		38-35-13
Lavatory Y					
101MG4	FLUSH SWITCH		261		
102MG4	FLUSH CONTROL UNIT		261		38-35-33
103MG4	WATER VALVE		261		38-35-37
104MG4	FLUSH VALVE		261		38-35-27
384173	TOILET UNIT		261		38-35-13
Lavatory Z					
101MG4	FLUSH SWITCH		252		
102MG4	FLUSH CONTROL UNIT		252		38-35-33
103MG4	WATER VALVE		252		38-35-37
104MG4	FLUSH VALVE		252		38-35-27
384170	TOILET UNIT		252		38-35-13

R **ON A/C 103-103, 106-106,

2. Component Location (Ref. Fig. 001)

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
12MG	CONTACTOR - R/H SYSTEM		260		
13MG	ALTITUDE PRESSURE SWITCH R/H		312	312AR	38-35-35
14MG	LIMIT SWITCH	863VU	221		

	FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
	15MG	SWITCH PUSHBUTTON	863VU	221		
	16MG	VACUUM BLOWER R/H		170	162AZ	38-35-15
	17MG	RELAY - R/H	800VU	223		
	18MG	LOGIC CONTROL UNIT R/H		170	162AL	38-35-31
	19MG	SENSOR A - WASTE LEVEL R/H		170	162AL	38-35-32
	20MG	SENSOR B - WASTE LEVEL R/H		170	162AL	38-35-32
	21MG	SENSOR C - WASTE LEVEL R/H		170	162AL	38-35-32
	112MG	CONTACTOR - L/H SYSTEM		260		
	113MG	ALTITUDE PRESSURE SWITCH L/H		312	312AR	38-35-35
	114MG	LIMIT SWITCH	863VU	221		
	115MG	SWITCH PUSHBUTTON	863VU	221		
	116MG	VACUUM BLOWER L/H		170	162AZ	38-35-15
	117MG	RELAY - L/H	800VU	223		
	118MG	LOGIC CONTROL UNIT L/H		170	162AL	38-35-31
	119MG	SENSOR A - WASTE LEVEL L/H		170	162AL	38-35-32
	120MG	SENSOR B - WASTE LEVEL L/H		170	162AL	38-35-32
	121MG	SENSOR C - WASTE LEVEL L/H		170	162AL	38-35-32
	384200	WASTE TANK - L/H		171	162AL	38-35-17
	384201	WASTE TANK - R/H		171	162AL	38-35-17
	384205	CHECK VALVE - VENT LINE L/H		171	162AL	38-35-21
	384206	CHECK VALVE - VENT LINE R/H		171	162AL	38-35-21
R	384260	VALVE SHAW		171	162AL	38-35-39
	1	WATER/WASTE SERVICE PANEL		171	171AL	
	Lavatory A					
	1MG5	FLUSH SWITCH		221		
	2MG5	FLUSH CONTROL UNIT		221		38-35-33
	3MG5	WATER VALVE		221		38-35-37
	4MG5	FLUSH VALVE		221		38-35-27
	384160	TOILET UNIT		221		38-35-13
	Lavatory T					
	1MG7	FLUSH SWITCH		241		
	2MG7	FLUSH CONTROL UNIT		241		38-35-33
	3MG7	WATER VALVE		241		38-35-37
	4MG7	FLUSH VALVE		241		38-35-27
	384166	TOILET UNIT		241		38-35-13
	Lavatory W					
	1MG6	FLUSH SWITCH		242		
	2MG6	FLUSH CONTROL UNIT		242		38-35-33
	3MG6	WATER VALVE		242		38-35-37
	4MG6	FLUSH VALVE		242		38-35-27
	384167	TOILET UNIT		242		38-35-13
	Lavatory X					
		FLUSH SWITCH		252		
		FLUSH CONTROL UNIT		252		38-35-33
		WATER VALVE		252		38-35-37
		FLUSH VALVE		252		38-35-27
		TOILET UNIT		252		38-35-13

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
Lavatory Y					
101MG4	FLUSH SWITCH		261		
102MG4	FLUSH CONTROL UNIT		261		38-35-33
103MG4	WATER VALVE		261		38-35-37
104MG4	FLUSH VALVE		261		38-35-27
384173	TOILET UNIT		261		38-35-13
Lavatory Z					
101MG4	FLUSH SWITCH		252		
102MG4	FLUSH CONTROL UNIT		252		38-35-33
103MG4	WATER VALVE		252		38-35-37
104MG4	FLUSH VALVE		252		38-35-27
384170	TOILET UNIT		252		38-35-13

R **ON A/C 101-200,

3. Description

Each vacuum toilet assembly is a self-contained, free standing unit, bolted to the lavatory floor and connected to plumbing and wiring.
One is installed in each lavatory compartment and comprise:

A. Toilet Unit in Lavatory A, T, W, Y and Z (Ref. Fig. 002)

(1) Toilet Bowl and Spray Ring

The toilet bowl is elliptically shaped on top and contoured with steep sloping sides with a waste exit hole of 1.75 inches (44.45 mm) diameter. It is made of stainless steel with an abrasive resistant, nonstick, nonwetting coating. The spray ring is attached to the top of the bowl and anti-siphon valve.

(2) Water Control Module

The water control module is self-contained and comprise:

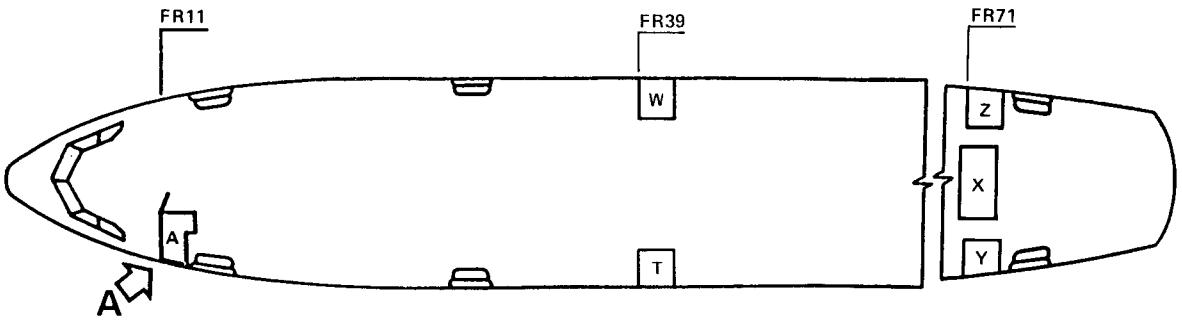
- Water Valve (solenoid controlled).
  When energized, the water valve opens and allows water to flow into the toilet bowl. The outlet of the valve is connected to the anti-siphon valve. The water valve is connected to and controlled by the flush control unit.
- Strainer
  The replaceable finger strainer inhibits lime scale and other impurities clogging the valves and spray ring.

(3) Anti-Siphon Valve

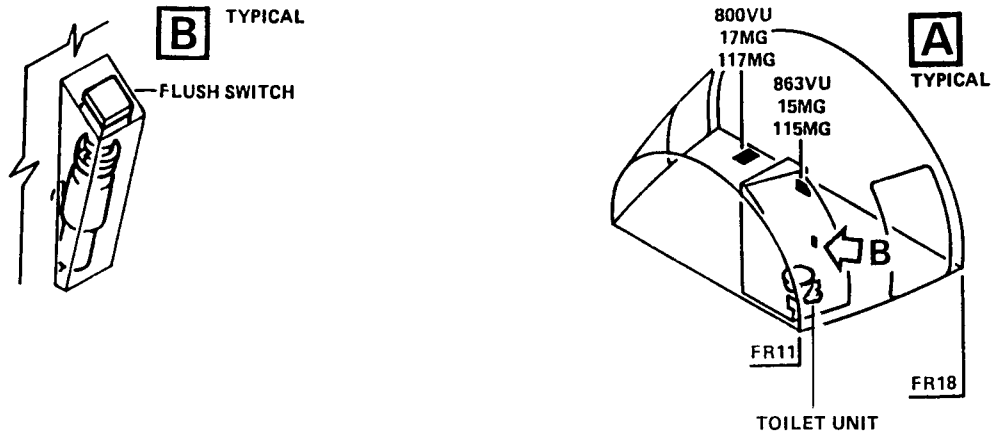
The anti-siphon valve prevents entry of contaminated water into the potable water line by returning any excess splash or backup water into the toilet bowl. It is installed above the toilet bowl.

(4) Flush Valve and Shutoff Valve

The flush valve is a self-contained, solenoid controlled unit.
It is plumbed to the toilet bowl outlet and electrically connected to the flush control unit. When energized by the flush control unit, it opens to allow passage of waste matter.



LAVATORY	A	T	W	X	Y	Z
TOILET UNIT	384160	384166	384167		384173	384170
FLUSH SWITCH	1MG5	1MG7	1MG6		101MG4	101MG3
FLUSH CONTROL UNIT	2MG5	2MG7	2MG6		102MG4	102MG3
WATER VALVE	3MG5	3MG7	3MG6		103MG4	103MG3
FLUSH VALVE	4MG5	4MG7	4MG6		104MG4	104MG3



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Component Location
Figure 001

The shutoff valve is installed in the toilet waste line, next to the flush valve. When operated it isolates the toilet unit from vacuum lavatory system.
A push-pull handle (in front of the toilet assembly) operates the shutoff valve.

(5)Flush Switch
The flush switch is a momentary type, actuated by a button.

B. Toilet Unit in Lavatory X (Ref. Fig. 003)

(1)Toilet Bowl and Spray Ring
The toilet bowl is made of stainless steel and has a nonstick coating applied to the inside surface. The spray ring is installed at the top of the bowl and is connected to the antisyphon valve.

(2)Water (Rinse) Valve
When energized, the water valve opens and allows water to flow into the toilet bowl. The outlet of the valve is connected to the anti-siphon valve. The water valve is connected to and controlled by the flush control unit.

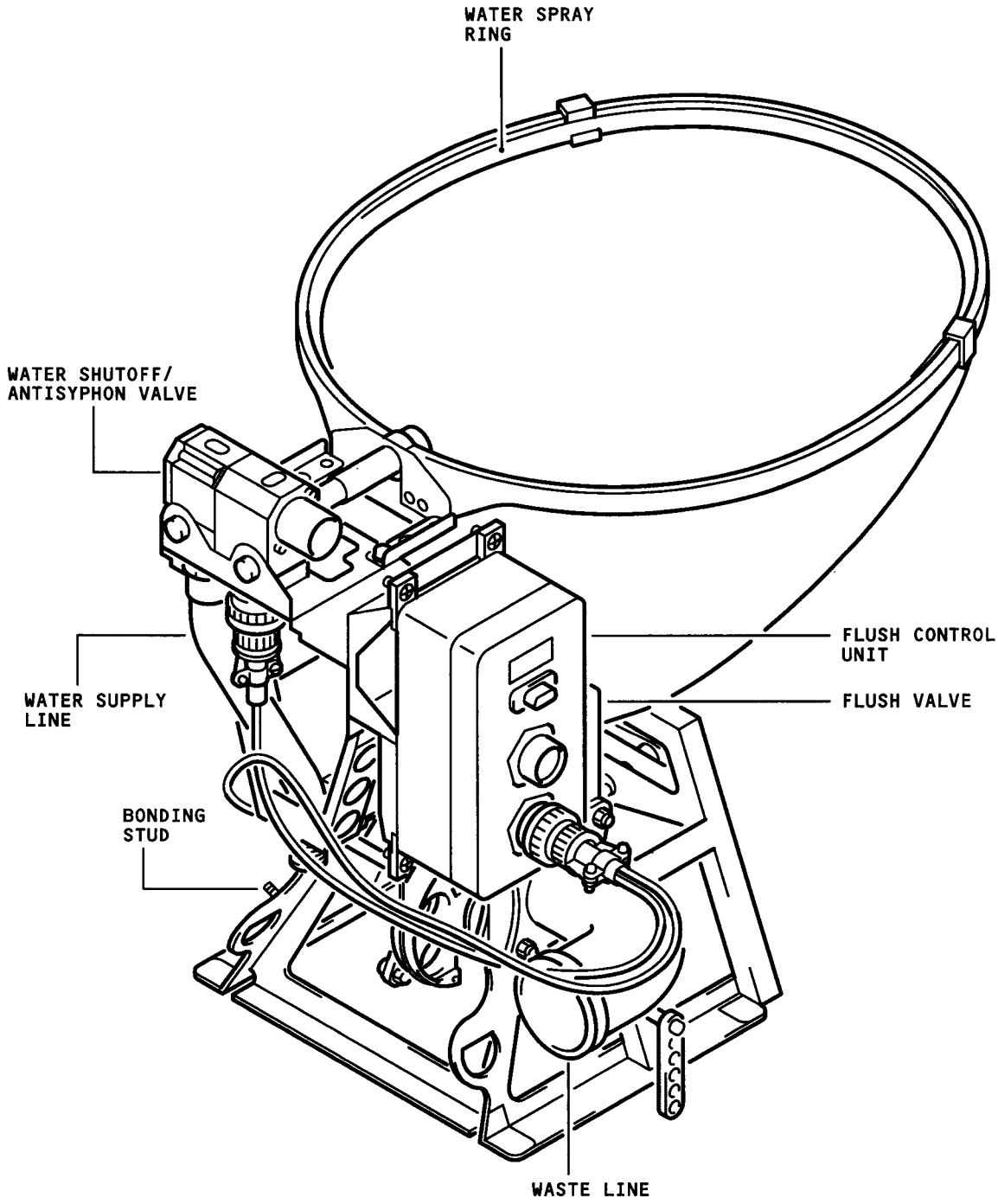
(3)Water Shutoff/Anti-Siphon Valve
This valve prevents entry of contaminated water into the potable water line by returning any excess splash or backup water into the toilet bowl. The water flow is controlled by a solenoid valve which is controlled by flush control unit.

(4)Flush Valve
The flush valve is a motor operated disk-valve. It is connected to the toilet bowl outlet. The valve opens during the flush cycle and is closed between the flush cycles.

R **ON A/C 101-102, 104-105, 107-200,

C. Waste Tank Assembly
The waste tank assembly is located below the cabin floor in the rear section (FR.71) of the aircraft and comprise:
- Waste Tank and Waste Level Sensors,
- Water Separator,
- Check Valve Flush Line,
- Check Valve Vent Line,
- Waste Inlet,
- Rinse Assembly,
- Waste Drain Connection and Waste Service Panel.

(1)Waste Tank
The waste tank is a metallic-lined, filament wound, cylindrical vessel with end domes, and polar inlets and outlets. It has a useable capacity of 265 l (70 US gal.) and a total capacity of 328 l (87 US gal.). There is an access hole for interior cleaning and inspection.



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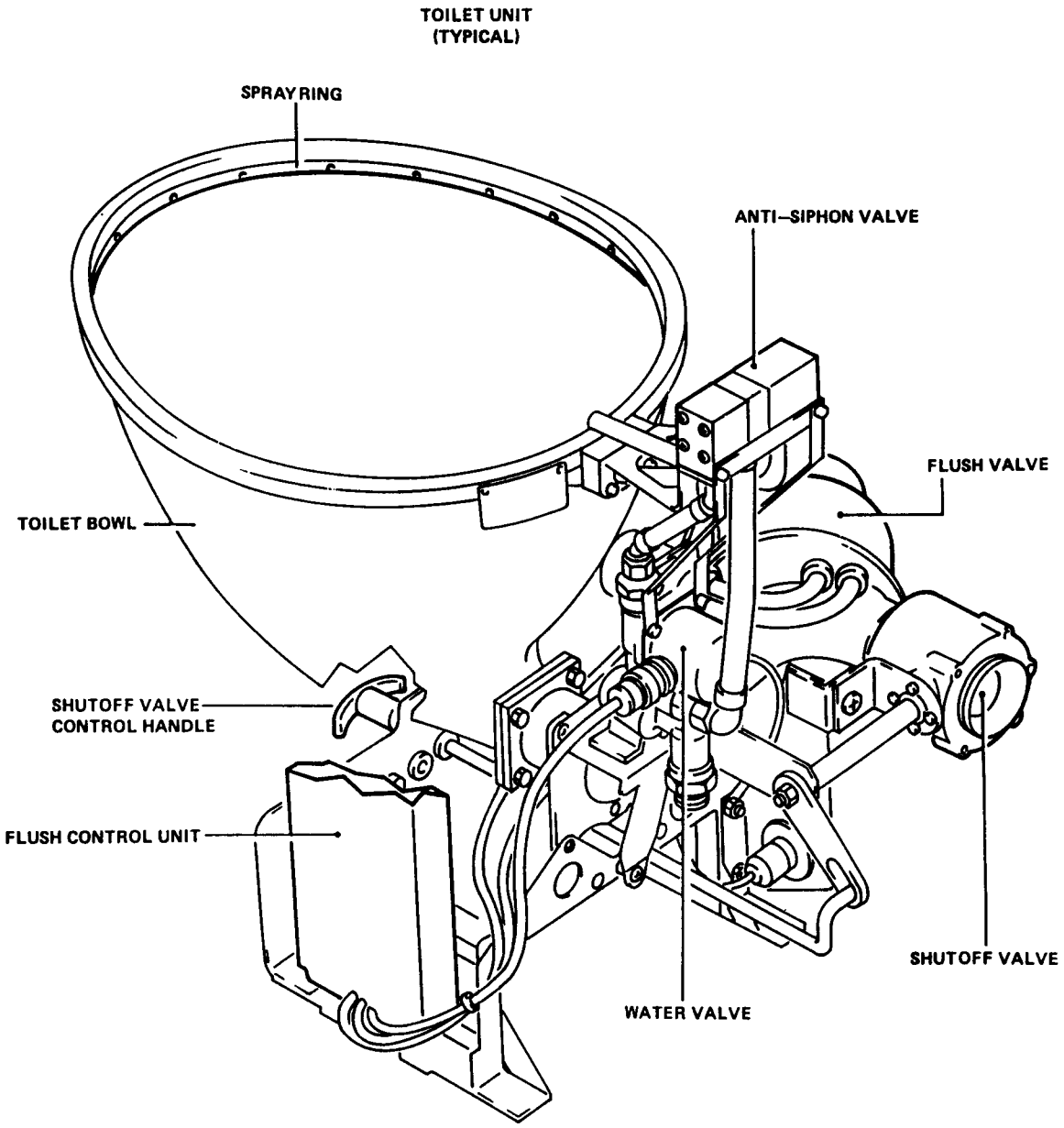
Vacuum Toilet Unit
Figure 002



BM6 38 35 00 0 CCMO 00

Vacuum Toilet Unit
Figure 003

(2)Water Separator
The water separator prevents any moisture or foam (formed by the incoming waste matter which could damage the vacuum blower) from entering the overboard vent line.
It is located inside and mounted to the top of the waste tank.
The water separator is a self-cleaning unit with no moving parts and can be removed/installed without removal of the waste tank.

(3)Check Valve - Flush Line
It is installed in the waste tank flush line and allows water to flow only into the waste tank.

(4)Vacuum Blower
The vacuum blower, when energized by the flush control unit, creates a negative pressure difference of 1 to 6 psi (0.07 to 0.42 bar) in the waste tank at sea level static condition and up to 16.000 ft. (max.) altitude. The vacuum blower is a radial flow type with an air cooled motor, connected to the waste tank and the overboard vent line by a 2.5 inch nom. I.D. inlet line and a 2.25 inch nom. I.D. differential line.

(5)Check Valve - Vent Line
It is installed in the overboard vent line and prevents ambient pressure entering the vacuum system.

(6)Waste Inlet
There are two waste inlet connections on the upper dome of the waste tank. The LH inlet pipe is for the forward, the RH for the aft lavatories.
The waste inlet connections, 2-inch nom. I.D. are designed to avoid clogging and the possibility of waste matter damaging the waste tank on high velocity entry.

(7)Rinse Assembly
The rinse assembly consists of two fittings located on the upper dome of the waste tank and a device within the waste tank. Flush/rinse connection points are at the waste service panel.

(8)Waste Drain Connection and Waste Service Panel
The waste drain connection is located on the lower dome. The waste tank outlet drain pipe is connected to the waste system dump valve and then plumbed to a common outlet with a TACO-valve at the waste service panel.
The waste system dump valve is operated by a control cable.
At the waste service panel, located between frames 70 and 71, there are two dump valve control handles, one for each system, two flush/rinse ports, one for each waste tank and one waste drain port.

D. System Control (Ref. Fig. 004, 005)

(1)Logic Control Unit
The logic control unit is an electronic assembly which controls the timing and event sequences of flush control unit, waste level sensors, vacuum blower and altitude pressure switch.
It computes: - Level sensor signals
- Flush control unit signals
- Altitude pressure switch signal
- Waste tank FULL signal.

The logic control unit is equipped with built-in test lights and a switch to check the status of waste level sensors i.e. operational or not-operational.
There is one logic control unit for each system and mounted to frame 70 next to the waste tanks.

(2)Level Sensors
Three waste level sensors are fitted to each tank. The upper two (Level Sensor 'A' and Level Sensor 'B') are for tank FULL signal. System shut-down occurs if either one detects tank FULL. The tank full level is defined as the level reached at the useable capacity of 265 l (70 US gal.).
A third level sensor (Level Sensor 'C') is installed at approximately 2/3 full level. The design objective includes the 2/3 full sensor in the decision logic for system shutdown control.

(3)Flush Control Unit
The flush control unit is an electronic assembly which controls the timing and event sequences of the flush cycle. One is installed in each toilet unit and computes the following electrical signals:
- Flush switch signal,
- Water valve signal,
- Flush valve signal,
- Switched vacuum blower signal.

(4)Altitude Pressure Switch
Two altitude pressure switches, one for each system, are mounted at frame 83 and switch 'ON' or 'OFF' the power supply to the vacuum blower. The power supply to the vacuum blower is 'ON' on ground and up to 16.000 ft. altitude. Above 16.000 ft. altitude, the power is 'OFF'.

R **ON A/C 103-103, 106-106,

C. Waste Tank Assembly
The waste tank assembly is located below the cabin floor in the rear section (FR.71) of the aircraft and comprise:
- Waste Tank and Waste Level Sensors,
- Water Separator,
- Check Valve Flush Line,
- Check Valve Vent Line,
- Waste Inlet,
- Rinse Assembly,
- Waste Drain Connection and Waste Service Panel.

(1)Waste Tank
The waste tank is a metallic-lined, filament wound, cylindrical vessel with end domes, and polar inlets and outlets. It has a useable capacity of 265 l (70 US gal.) and a total capacity of 328 l (87 US gal.). There is an access hole for interior cleaning and inspection.

(2)Water Separator
The water separator prevents any moisture or foam (formed by the incoming waste matter which could damage the vacuum blower) from entering the overboard vent line.
It is located inside and mounted to the top of the waste tank.
The water separator is a self-cleaning unit with no moving parts and can be removed/installed without removal of the waste tank.

(3)Check Valve - Flush Line
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(5)Check Valve - Vent Line
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(7)Rinse Assembly
The rinse assembly consists of two fittings located on the upper dome of the waste tank and a device within the waste tank. Flush/rinse connection points are at the waste service panel.

(8)Waste Drain Connection and Waste Service Panel
The waste drain connection is located on the lower dome. The waste tank outlet drain pipe is connected to the waste system dump valve and then
R plumbed to a common outlet with a SHAW-valve at the waste service panel.
The waste system dump valve is operated by a control cable.
At the waste service panel, located between frames 70 and 71, there are two dump valve control handles, one for each system, two flush/rinse ports, one for each waste tank and one waste drain port.

D. System Control (Ref. Fig. 004, 005)

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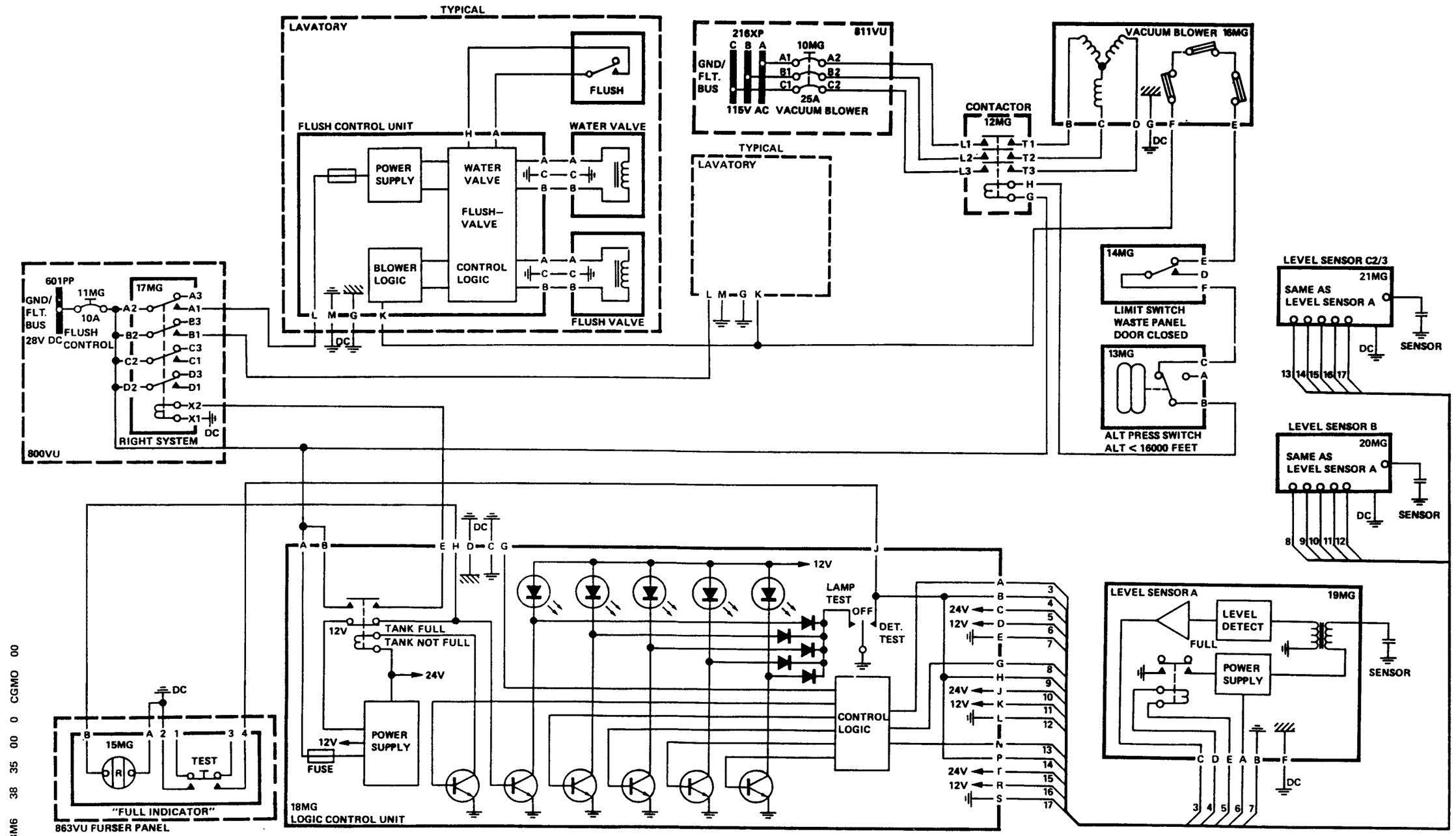
- Water valve signal,
- Flush valve signal,
- Switched vacuum blower signal.

(4)Altitude Pressure Switch
Two altitude pressure switches, one for each system, are mounted at frame 83 and switch 'ON' or 'OFF' the power supply to the vacuum blower. The power supply to the vacuum blower is 'ON' on ground and up to 16.000 ft. altitude. Above 16.000 ft. altitude, the power is 'OFF'.

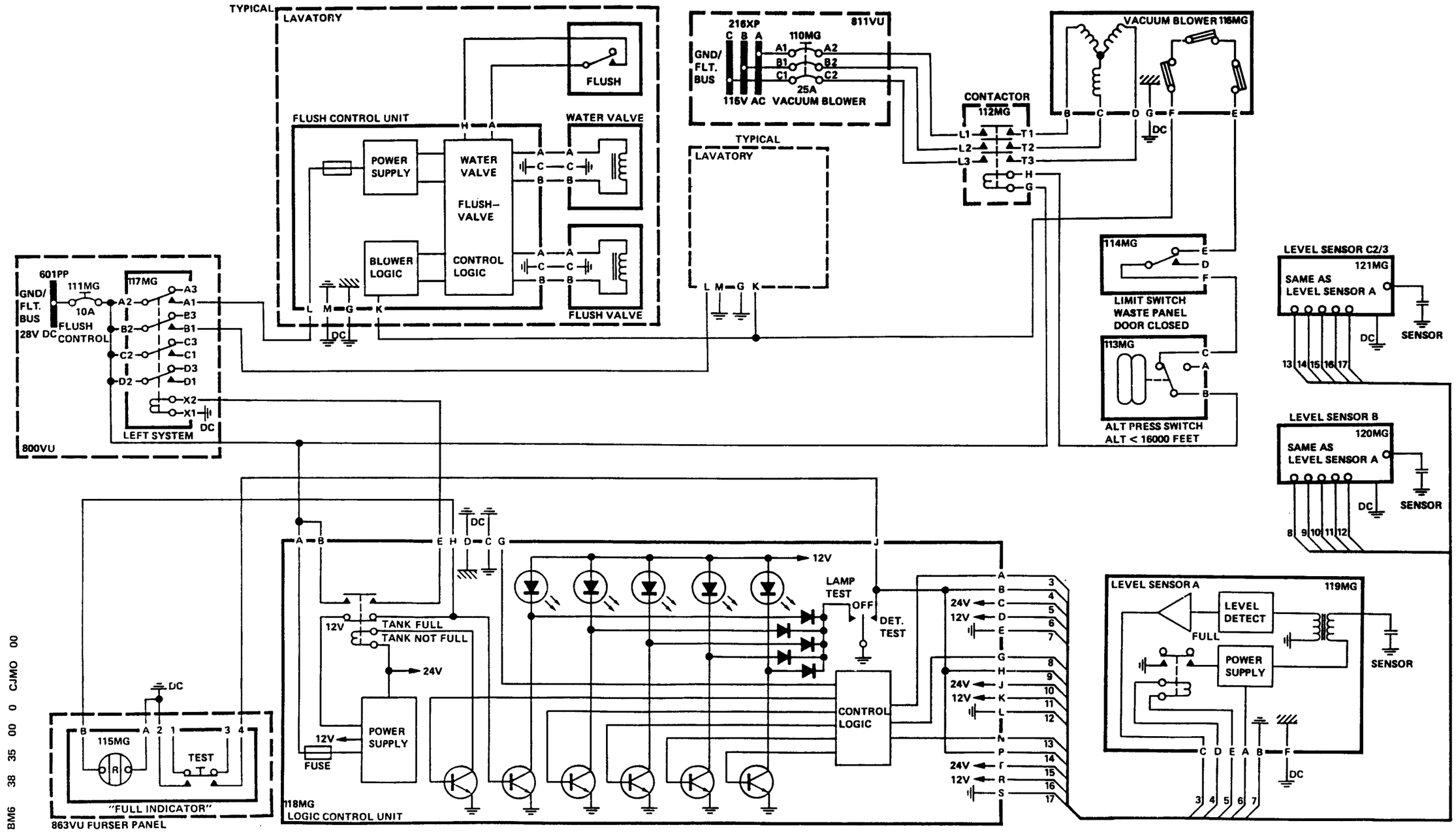
R **ON A/C 101-102, 104-105, 107-200,

4. Operation

A. Flush Control Unit (Ref. Fig. 006)
Upon actuation of the toilet flush switch, the flush control unit receives an electrical signal and controls the following steps:
- activating the vacuum blower directly, from 0 ft. up to 16.000 ft. (4876.9 m) altitude only. The input for this information is given by the altitude pressure switch. Above 16.000 ft. (4876.9 m) the vacuum blower is off and the system functions with the cabin to ambient pressure differential. In this case, the air is led through the by-pass line via the vent line check valve, apart from this the flush cycle remains unchanged.
- after a delay of one second, it opens the water valve for one second to discharge a water quantity of 0.18 - 0.206 l (0.048 - 0.055 US gal.).
- 2 seconds after starting the cycle, it opens the flush valve for 4 seconds to rinse waste matter with water supplied from the water valve.
- The cycle duration is 15 seconds after pressing the flush switch. A re-start of the flush cycle within this time is inhibited.



Electrical Schematic - R/H
Figure 004



Electrical Schematic - L/H
Figure 005

B. Logic Control Unit
The logic control unit performs the following control functions:
- checks and compares the signals from the waste level sensors. When either one of the full level sensors detects a tank FULL, it initiates an electrical signal from the flush switches to the logic control unit to inhibit further flushing of the toilets belonging to the particular system (system shut down).
- computes the signals from the waste level sensors and provides output signals to the purser's panel for '2/3' and 'FULL' (if installed) tank waste level indication.
- when a flush signal is received from a flush control unit, it disables all other flush control units of the system for 5 seconds.

C. Waste Tank Draining and Flushing
During servicing, a toilet servicing vehicle is connected to the flush and drain connection points at the service panel. The spring loaded TACO valve and the waste system dump valves are opened and the waste tanks drained. When empty, they require to be flushed with water.
The water pressure must not exceed 50 psi. (3.45 bar).
When the flushing procedure is completed, the valves are closed.

R **ON A/C 103-103, 106-106,

4. Operation

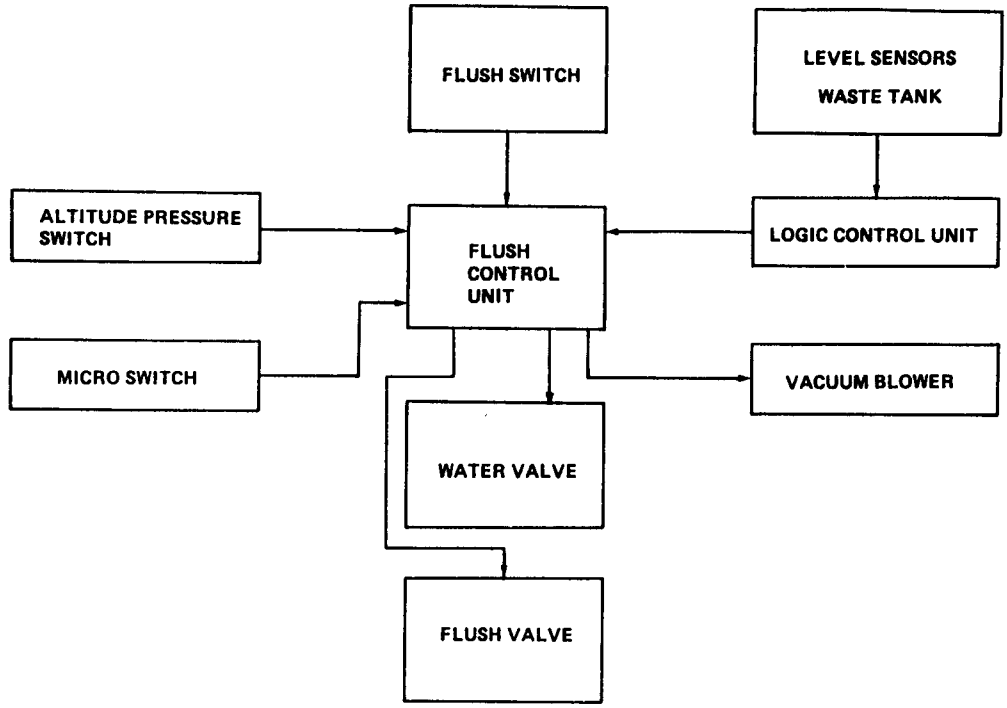
A. Flush Control Unit (Ref. Fig. 006)
Upon actuation of the toilet flush switch, the flush control unit receives an electrical signal and controls the following steps:
- activating the vacuum blower directly, from 0 ft. up to 16.000 ft. (4876.9 m) altitude only. The input for this information is given by the altitude pressure switch. Above 16.000 ft. (4876.9 m) the vacuum blower is off and the system functions with the cabin to ambient pressure differential. In this case, the air is led through the by-pass line via the vent line check valve, apart from this the flush cycle remains unchanged.
- after a delay of one second, it opens the water valve for one second to discharge a water quantity of 0.18 - 0.206 l (0.048 - 0.055 US gal.).
- 2 seconds after starting the cycle, it opens the flush valve for 4 seconds to rinse waste matter with water supplied from the water valve.
- The cycle duration is 15 seconds after pressing the flush switch. A re-start of the flush cycle within this time is inhibited.

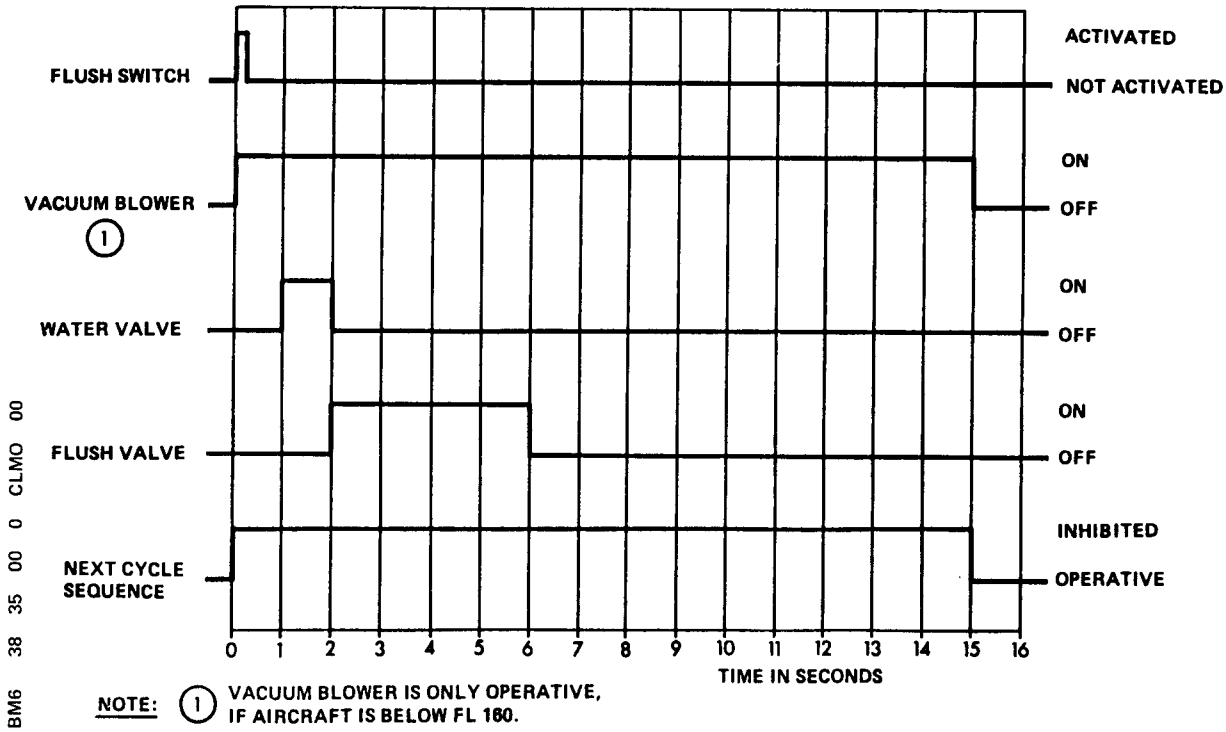
B. Logic Control Unit
The logic control unit performs the following control functions:
- checks and compares the signals from the waste level sensors. When either one of the full level sensors detects a tank FULL, it initiates an electrical signal from the flush switches to the logic control unit to inhibit further flushing of the toilets belonging to the particular system (system shut down).

- computes the signals from the waste level sensors and provides output signals to the purser's panel for '2/3' and 'FULL' (if installed) tank waste level indication.
- when a flush signal is received from a flush control unit, it disables all other flush control units of the system for 5 seconds.

C. Waste Tank Draining and Flushing

During servicing, a toilet servicing vehicle is connected to the flush
R and drain connection points at the service panel. The spring loaded SHAW valve and the waste system dump valves are opened and the waste tanks drained. When empty, they require to be flushed with water.
The water pressure must not exceed 50 psi. (3.45 bar).
When the flushing procedure is completed, the valves are closed.





Functional Diagram
Figure 006

1. System Test

A. Reason for the Job
- Test of tank level sensors
- Test of vacuum blower and toilet function.

NOTE : The vacuum toilet system test applies to the LH and RH toilet systems. Both systems operate independently of each other.

2. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 4.6 to 5.2 m (15 to 17 ft.)
B.	Access Platforms, up to 2.3 m (7.50 ft.)
C.	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz
D. 98A38308235000	Adapter Altitude Pressure Switch
R or	
R 98A38308456000	

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-16-38, P. Block 1	Replenishing Toilets
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 38-40-00, P. Block 301	Air Supply

3. Procedure

A. Job Set-Up

(1)Drain and flush waste tank (Ref. 12-16-38, P. Block 1).
NOTE : Do not prime waste tanks at this stage.
(2)Fill potable water system (Ref. 12-15-38, P. Block 1), if necessary, and pressurize water system (Ref. 38-40-00, P. Block 301).
(3)Connect electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).
(4)Make sure that electronics racks ventilation is correct.
(5)Make sure that the following circuit breakers are closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(6)Position access platform and open BULK cargo compartment door (Z813).
(7)Position access platform and open toilet service panel access door (171BL).
(8)Open access door (162AZ) to gain access to logic control unit, waste tanks and vacuum blower.
(9)Position access platform and open access door (312AR) to gain access to altitude pressure switches.
(10)Make sure that waste drain valves are closed.
(11)Connect service vehicle 1-inch flush/fill hose to flush/fill port in service panel.
(12)Carry out the following tests:

B. Test of Tank Level Sensors (LH or RH System)

ACTION	RESULT
1. On toilet service panel: - Press and hold limit switch (14MG).	
2. On toilet service panel: - Fill 170 - 200 l (44.9 - 52.8 US gal.) of water into waste tank.	On purser panel 863VU: - Tank 2/3 FULL indication (if installed) comes on. On logic control unit, LED indications are: - SENSOR A is off, - SENSOR B is off, - SENSOR C comes on, - TANK FULL is off.
3. In any lavatory of tested system: - Push flush switch.	- Vacuum blower operates. - Toilet system operates.
4. On toilet service panel: - Top-up waste tank to 260 - 280 l	On purser panel 863VU: - Tank 2/3 FULL indication (if

ACTION	RESULT
(68.7 - 74.0 US gal.).	installed) remains on. - Tank FULL indication comes on. On logic control unit, LED indications are: - SENSOR A comes on, - SENSOR B comes on, - SENSOR C remains on, - TANK FULL comes on. NOTE : The logic control TANK FULL signal will cause shut down of the system.
5. In any lavatory of tested system: - Push flush switch.	- Vacuum blower is inoperative. - Toilet System is inoperative.
6. On toilet service panel: - Release limit switch (14MG). - Drain and prime waste tank (Ref. 12-16-38, P. Block 1).	

C. Test of Vacuum Blower and Toilet function (LH or RH System).

ACTION	RESULT
1. On toilet service panel: - Press and hold limit switch (14MG).	
2. In lavatory of tested system: - Push flush switch in each lavatory. NOTE : Next cycle sequence of each tested lavatory is inhibited for 15 sec.	On toilet system: - Vacuum blower operates. - Water flows into toilet bowl. - Air flows out of overboard vent line. - Flush valve opens and water is sucked out of toilet bowl.
3. On altitude pressure switches: R - Connect adapter altitude pressure R switch to altitude pressure switch R (113MG) LH or (13MG) RH. Apply a differential pressure to the altitude pressure switch to simulate an altitude of 4647.9 - 4663.1 m (15249 - 15299 ft.)	
4. In lavatory of tested system: - Push flush switch.	On toilet system: - Vacuum blower operates. - Water flows into toilet bowl. - Air flows out of overboard vent line. - Flush valve opens and water is sucked out of toilet bowl.
5. In lavatory of tested system: - Push flush switch again within	On Toilet system: Next cycle sequence is inhibited

ACTION	RESULT
10 sec.	for approx. 15 sec. - Vacuum blower is still operating. - No water flows into toilet bowl.
6. On altitude pressure switches: - Increase differential pressure to simulate an altitude of 4663.4 - 5091.6 m (15300 - 16700 ft.).	
7. In lavatory of tested system: - Push flush switch.	On toilet system: - Vacuum blower does not operate. - No air flows out of overboard vent line. - Water flows into toilet bowl. - Water drains out of toilet bowl.
8. On Altitude Pressure Switches: - decrease differential pressure to simulate an altitude of 3810 m (12500 ft.).	
9. In lavatory of tested system: - Push flush switch.	On toilet system: - Vacuum blower operates. - Air flows out of overboard vent line. - Water flows into toilet bowl. - Water is sucked out of toilet bowl.
10. On altitude pressure switches: R - Disconnect adapter altitude pressure sw from altitude pressure switch (113MG) LH or (13MG) RH.	
11. On toilet service panel: - Release limit switch (14MG).	

D. Close-Up
(1) Make sure that working area is clean and clear of tools and miscellaneous items of equipment.
(2) Drain potable water system, if necessary (Ref. 12-24-38, P. Block 1).
(3) De-energize the aircraft electrical network and disconnect ground power unit (Ref. 24-41-00, P. Block 301).
(4) Disconnect service vehicle 1-inch flush/fill hose from flush/fill port in service panel and close toilet service panel access door (171BL).
(5) Close access door (162AZ) and BULK cargo compartment door (Z813).
(6) Close access door (312AR).
(7) Remove access platforms.

4. Leakage Test of the Vacuum System

A. Reason for the Job
- Self Explanatory

5. Equipment and Materials

ITEM	DESIGNATION
A.	Stop Watch
B.	Access Platform, up to 2.3 m (7.50 ft.)
C. 9501501-4000	Leak Tester - Vacuum Toilet System

6. Procedure

A. Job Set-Up

(1)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(2)Position access platform below the vacuum-system overboard vents.
(3)Position access platform at BULK cargo compartment.
(4)Open BULK cargo compartment door (Z813).
(5)Open access door (162AZ).

B. Installation of the Test Tool Leak Tester - Vacuum Toilet System (9501501-4000) (Ref. Fig. 501)

WARNING : ALWAYS WEAR RUBBER GLOVES, GOGGLES AND PROTECTIVE CLOTHES WHEN YOU INSTALL THE TEST TOOL.

(1)Clean the component interface and the adjacent area.
(2)To measure the vacuum system :
(a)Connect the measuring part of the tool kit and the adapter to the overboard vent.

C. Leakage Check of the Vacuum System

(1)Do this test before and after removal/installation of components of the vacuum toilet system.

NOTE : Compare the result of the leak checks recorded before the removal and after the installation of the component. The result after the installation must not be less than 10% of the result before the removal.

R (2)Remove safety clips and tags and close circuit breakers 10MG, 11MG,
R 110MG and 111MG.

D. Test

ACTION	RESULT
1. In the lavatory: R - push and release the toilet flush switch. R R - use a stop watch and record the time of the flush cycle. R	At the manometer: - after 30 seconds the negative pressure must be minimum -200 mbar (-2.90 psi). - after 120 seconds the negative pressure must be minimum -80 mbar (-1.16 psi). NOTE : Record the value on the manometer at 30 seconds and at 120 seconds. First measurements.
At the measuring tool: - open the manual ventilation valve and release the pressure. - wait 2 minutes.	At the manometer: - the pressure is zero.
2. In the lavatory: R - push and release the toilet flush switch. R R - use a stop watch and record the time of the flush cycle. R	At the manometer: - after 30 seconds the negative pressure must be minimum -200 mbar (-2.90 psi). - after 120 seconds the negative pressure must be minimum -80 mbar (-1.16 psi). NOTE : Record the value on the manometer at 30 seconds and at 120 seconds. Second measurement.
At the measuring tool: - open the manual ventilation valve and release the pressure. - wait 2 minutes.	At the manometer: - the pressure is zero.
3. In the lavatory: R - push and release the toilet flush switch. R R - use a stop watch and record the time of the flush cycle. R	At the manometer: - after 30 seconds the negative pressure must be minimum -200 mbar (-2.90 psi). - after 120 seconds the negative pressure must be minimum -80 mbar (-1.16 psi). NOTE : Record the value on the manometer at 30 seconds and at 120 seconds. Third measurement.

ACTION	RESULT
At the measuring tool: - open the manual ventilation valve and release the pressure.	
(1)The average value of the measurements at 30 seconds must not be less than -200 mbar (-2.90 psi).	
(2)The average value of the measurements at 120 seconds must not be less than -80 mbar (-1.16 psi).	

E. Removal of the Test Tool (Ref. Fig. 501)

WARNING : ALWAYS WEAR RUBBER GLOVES, GOGGLES AND PROTECTIVE CLOTHES WHEN YOU REMOVE THE TEST TOOL.

(1)Disconnect the measuring part and the adapter of the test tool kit from the overboard vent.

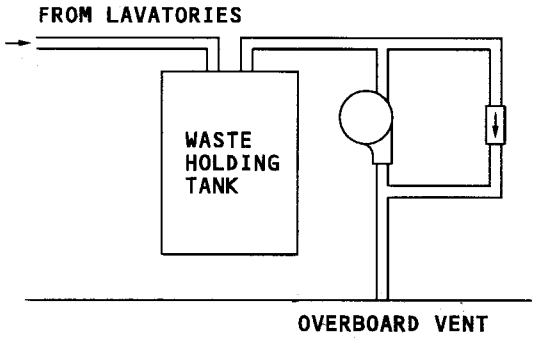
(2)Clean the component interface and the adjacent area.

F. Close-Up

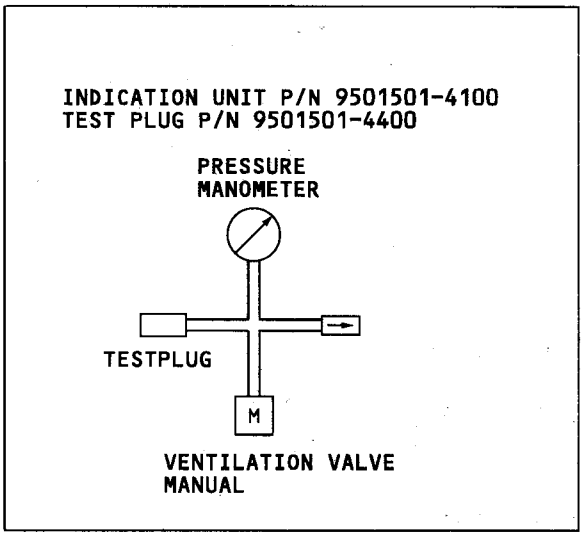
(1)Make sure that working area is clean and clear of tools and miscellaneous items of equipment.

(2)Close access door (162AZ) and BULK cargo compartment door (Z813).

(3)Remove access platforms.



TOOL KIT P/N 9501501-4000



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Measuring Tool
Figure 501

R

WARNING : DO NOT DO WORK ON THE TOILET WASTE SYSTEM AND THE POTABLE WATER SYSTEM AT THE SAME TIME. THIS WILL PREVENT CONTAMINATION OF THE POTABLE WATER SYSTEM. SUCH CONTAMINATION CAN BE DANGEROUS TO HEALTH.

WARNING : ALWAYS USE RUBBER GLOVES WHEN YOU DO WORK:
- ON THE TOILET WASTE SYSTEM, OR
- ON PARTS THAT HAVE CONTAMINATION FROM THE WASTE SYSTEM.
WHEN YOU COMPLETE THE WORK PROCEDURE, CLEAN YOUR HANDS WITH SOAP AND WATER.
THIS WILL PREVENT INFECTION (TOILET WASTE IS DANGEROUS TO HEALTH).

WARNING : WHEN YOU REMOVE A COMPONENT OF THE TOILET WASTE SYSTEM, ALWAYS PUT IT IN A PLASTIC BAG, THEN SEAL THE BAG.
DO NOT PUT DOCUMENTS INTO THE PLASTIC BAG. SEAL THE BAG FIRST, THEN ATTACH THE DOCUMENT TO IT.
THIS WILL PREVENT INFECTION (CONTAMINATION FROM TOILET CAN BE DANGEROUS TO HEALTH).

CAUTION : DAMAGE TO TANKS WILL OCCUR IF WATER IS ALLOWED TO FREEZE.

1. Reasons for the Job
   A. Removal of Obstruction from Toilet Bowl
   B. Cleaning and Disinfection of Toilet Unit and Vacuum Waste Line
   C. Cleaning of Waste Tank
   D. Preventive Cleaning of Vacuum Waste Line
   E. High Pressure Cleaning of the Vacuum Waste Line
   F. Special Cleaning of Waste Tank Area and Related Component Inspections
R G. High Pressure Cleaning of the Vacuum Waste Line with VACLAV2

2. Equipment and Materials

ITEM	DESIGNATION
A.	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz
B.	Ground Support Unit Commercially Available Equipment - Electrical Power Supply 220 V/50 Hz or 110 V/50 Hz Cleaning pressure 0-100 bar (0-1450 psi) High Pressure Water Hose 10 mm (0.39 in.) dia. Spray Nozzle with six Holes 0.8 mm (0.0315 in.) and a Spray Angle of approx. 40 ° to the Rear or Spray Nozzle with seven Holes 0.8 mm (0.0315 in.) and a Spray Angle of approx. 40 ° to the Rear and one Hole straight ahead. Cleaning pressure 0-100 bar (0-1450 psi) NOTE : Power supply Cable (15 - 30 m) Water Hose (approx. 50 m)

	ITEM	DESIGNATION
	C.	Vacuum Hose with Filterbox
	D.	Toilet Service Vehicle with 1-inch and 4-inch Standard Couplings
	E.	Access Platform, 2.3 m (7.50 ft.)
	F.	Lint-free Cloth
	G.	Crushed Ice
	H.	Vinegar-essence (5%)
R	J.	Plastic sheets
R	K.	BORESCOPE DIA 25.0 (1.0 IN) - FLEXIBLE
R	L.	CLEANING EQUIPMENT VACLAV 2 - TANK, INTERNAL
	M. Material No. 14-001	Disinfectants (Ref. 20-31-00)
	N. Material No. 04-017	Common Greases (Ref. 20-31-00)
	O. Material No. 11-028	Cleaning Agents (Ref. 20-31-00)
	P. Material No. 11-003	Cleaning Agents (Ref. 20-31-00)
R	Q. Material No. 14-501	DISINFECTANT (Ref. 20-31-00)

Referenced Procedures

- 12-16-38, P. Block 1	Replenishing Toilets
- 12-21-12, P. Block 201	Internal Cleaning
- 21-31-12, P. Block 401	Valve - Cabin Pressure Outflow
- 24-41-00, P. Block 301	AC-External Power Control
- 25-00-00, P. Block 301	Equipment/Furnishings - Servicing
- 25-45-11, P. Block 401	Toilet Shroud
- 25-50-21, P. Block 401	Heat and Sound Insulation
- 25-54-10, P. Block 201	FWD Cargo Compartment Linings
- 25-55-10, P. Block 201	AFT Cargo Compartment Linings
- 38-35-11, P. Block 401	Waste Tank
- 38-35-13, P. Block 401	Toilet Assy
- 38-35-15, P. Block 401	Vacuum Blower
- 38-35-17, P. Block 401	Waste System Dump Valve
- 38-35-29, P. Block 401	Waste Separator
- 38-35-31, P. Block 401	Logic Control Unit
- 38-35-32, P. Block 401	Waste Level Sensor
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
- SRM 51-78-40, P. Block 1	(For Corrective Action)

3. Procedure

A. Removal of Obstruction from Toilet Bowl

(1)Job set-up

(a)Connect electrical ground power unit, and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).

(b)Make certain that electronics racks ventilation is correct.

(c)Make certain that the following circuit breakers are closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12

PANEL	SERVICE	IDENT.	LOCATION
811VU	VACUUM BLOWER/LH	11OMG	C 5
811VU	VACUUM BLOWER/RH	1OMG	C 8

WARNING : FOR HEALTH REASONS, ALWAYS WEAR RUBBER GLOVES WHEN HANDLING CONTAMINATED COMPONENTS.

(2)Cleaning

(a)Connect vacuum hose and filter box between obstructed toilet bowl and functional toilet bowl.

NOTE : Make certain that connections do not leak.

(b)Flush functional toilet unit until obstructed toilet unit is clear.

(c)Disconnect vacuum hose and filter box.

(3)Close-up

(a)Drain and flush waste tank (Ref. 12-16-38, P. Block 1).

(b)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

(c)De-energize aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

B. Cleaning and Disinfection of Toilet Unit and Vacuum Waste Line

(1)Job set-up

(a)Connect electrical ground power unit, and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).

(b)Make certain that electronics racks ventilation is correct.

(c)Make certain that the following circuit breakers are closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	11OMG	C 5
811VU	VACUUM BLOWER/LH	1OMG	C 8

(d)Remove toilet shroud (Ref. 25-45-11, P. Block 401).

WARNING : FOR HEALTH REASONS, ALWAYS WEAR RUBBER GLOVES WHEN HANDLING CONTAMINATED COMPONENTS.

(2)Cleaning

(a)Clean toilet unit and toilet unit area with disinfectant and lint-free cloth.

(b)Put 1 l (0.26 US gal.) disinfectant fluid Material No. 14-001 in all toilet bowls, and flush toilet units.

(3)Close-up

(a)Drain and flush waste tank (Ref. 12-16-38, P. Block 1).

(b)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

(c)Install toilet shroud (Ref. 25-45-11, P. Block 401).

(d)De-energize aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

C. Cleaning of Waste Tank (Ref. Fig. 704)

(1)Job set-up

CAUTION : DAMAGE TO TANKS WILL OCCUR IF WATER IS ALLOWED TO FREEZE.

(a)Drain and flush waste tank (Ref. 12-16-38, P. Block 1).

NOTE : Do not prime waste tank at this stage.

(b)Position access platform at Bulk cargo compartment.

(c)Open Bulk cargo compartment door (Z813).

(d)Open access door (162AZ).

WARNING : FOR HEALTH REASONS, ALWAYS WEAR RUBBER GLOVES WHEN HANDLING CONTAMINATED COMPONENTS.

(e)Remove the top waste level sensor from waste tank (Ref. 38-35-32, P. Block 401).

(f)Connect waste drain hose of service vehicle to waste service panel.

(g)Connect clean water supply to ground support unit.

(h)Connect electrical power to ground support unit.

(j)Attach clean water supply to level sensor flange of waste tank.

NOTE : Make certain that tapered plug of the cleaning adapter is secured in the tank.

(k)Open waste drain valve.

(2)Cleaning

(a)Energize ground support unit.

(b)Open shutoff valve and adjust cleaning pressure to 9.3 bar (135 psi).

(c)Flush until clear water flows out of waste drain valve.

(d)Flush for 1 minute with disinfecting fluid Material No. 14-001.

(e)Reduce cleaning pressure to minimum and close shutoff valve.

(f)De-energize ground support unit.

(g)Make certain that nozzles are clean of disinfectant and calcium (Ref. 38-35-28, P. Block 201).

(h)Make certain that level sensors are clean of disinfectant and calcium.

(3)Close-up

(a)Disconnect clean water supply hose from level sensor flange of waste tank.

(b)Install waste level sensor (Ref. 38-35-32, P. Block 401).

(c)Make certain that working area is clean and clear of miscellaneous items of equipment.

(d)Close access door (162AZ).

(e)Close bulk cargo compartment door (Z 813) and remove access platform.

(f)De-energize aircraft electrical network, and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

(g)Disconnect waste drain hose of service vehicle from waste service panel.

(h)Close waste drain valve.

(j)Disconnect clean water supply from ground support unit.

(k)Disconnect electrical power from ground support unit.

(l)Prime waste tank (Ref. 12-16-38, P. Block 1), if necessary.

D. Preventive Cleaning of Vacuum Waste Lines

NOTE : Application of this preventive cleaning procedure on a weekly basis may reduce material build up in the vacuum waste lines.

(1)Job set-up

(a)Connect electrical ground power unit, and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(b)Make certain that electronics racks ventilation is correct.
(c)Make certain that the following circuit breakers are closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(d)Make certain that the portable water system contains water and that it is pressurized.
(e)Drain and flush waste tank (Ref. 12-16-38, P. Block 1).
(f)Prime waste tank (Ref. 12-16-38, P. Block 1).
1 Make sure that each waste tank contains 50 l (13.20 US gal.) of water.

(2)Cleaning with vinegar
(a)Flush the toilet once, to verify that the system operates normally.
(b)Pour 2 l (0.5 US gal.) of crushed ice (no ice cubes) into the toilet bowl.
(c)Pour 2 l (0.5 US gal.) of vinegar (10% acetic acid) into the toilet bowl.
CAUTION : DO NOT LET THE SOLUTION STAY IN THE TOILET BOWL, THE SOLUTION MAY CAUSE CORROSION.
(d)Flush the toilet immediately.
(e)Flush the toilet three more times to make sure that no solution stays in the toilet.
(f)Repeat this procedure for each toilet.
(3)Cleaning with cleaning agent (Mat. No. 11-028)

WARNING : USE SOLVENTS/CLEANING AGENTS, SEALANTS AND OTHER SPECIAL MATERIALS ONLY WITH A GOOD SUPPLY OF AIR.
OBEY THE MANUFACTURERS INSTRUCTIONS.
PUT ON PROTECTIVE CLOTHING, RUBBER GLOVES, GOGGLES AND A MASK.
DO NOT GET THEM IN YOUR MOUTH.
DO NOT SMOKE.
DO NOT BREATHE THE GAS.
THESE MATERIALS ARE POISONOUS AND SKIN IRRITANTS.
GET MEDICAL HELP IF YOUR SKIN OR EYES BECOME IRRITATED.

(a)Flush the toilet assembly, to verify that the system operates normally.
R (b)Put 1 l (0.2641 US gal.) of cleaning agent (Mat. No. 11-028) into
R each toilet bowl for 10 minutes soaking starting at the forward

R lavatories.
R (c)Put 2 l (0.5238 US gal.) of crushed ice into the toilet bowl and
R flush the toilet immediately 2 times. Do this procedure for all of
R the toilets in the aircraft starting at the forward lavatories.

R NOTE : Start the procedure at the most forward lavatory.
R Do not bypass the cleaning agent soaking.

R (d)After approx. 30 minutes, flush the toilet assemlies three times.

(4)Close-up
(a)Drain and flush waste tank (Ref. 12-16-38, P. Block 1).
(b)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(c)Prime waste tank (Ref. 12-16-38, P. Block 1), if necessary.
(d)De-energize aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

E. High Pressure Cleaning of the Vacuum Waste Line
(1)Job set-up
(a)Connect electrical ground power unit, and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(b)Make certain that electronics racks ventilation is correct.
(c)Make certain that the following circuit breakers are closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/LH	10MG	C 8

(d)Remove toilet shroud (Ref. 25-45-11, P. Block 401).
(e)Remove the FWD cargo compartment linings (Ref. 25-54-10, P. Block 201) to get access to the vacuum waste lines.
(f)Remove the AFT cargo compartment linings (Ref. 25-55-10, P. Block 201) to get access to the vacuum waste lines.
WARNING : FOR HEALTH REASONS, ALWAYS WEAR RUBBER GLOVES WHEN HANDLING CONTAMINATED COMPONENTS.
(2)Cleaning
NOTE : Start the cleaning procedure in forward lavatory on the LH or RH side and work towards the rear lavatory.
(a)Flush the toilet once, to verify that the system operates normally.
(b)Drain and flush waste tank (Ref. 12-16-38, P. Block 1).
(c)Prime waste tank (Ref. 12-16-38, P. Block 1).
1 Make sure that each waste tank contains 50 l (13.20 US gal.) of water.
(d)Close manual water shutoff valve.
(e)Disconnect waste line from toilet assy (Ref. 38-35-13, P. Block 401), if necessary remove toilet assy, to gain access to waste line inlet.
(f)Put protective covers on the toilet floor and surrounding carpet.
(g)Adjust water pressure of ground support unit to max. 100 bar

(1450 psi).

NOTE : For better cleaning results, use hot water, up to 60 °C (140 °F).

(h)Insert high pressure hose approx. 1 m (3.28 ft.) into the waste line.

NOTE : If necessary lubricate high pressure hose with Silicone grease (Material No. 04-017) to reduce friction between hose and vacuum waste line.

CAUTION : IF NO SUCTION OCCURS WHEN THE FLUSH BUTTON IS PRESSED STOP HIGH PRESSURE WATER SUPPLY AT ONCE, OTHERWISE FLOODING OF THE LAVATORY MAY OCCUR.

(j)Start high pressure water supply and push flush button every 30 sec.

NOTE : Pressing the flush button will start the vacuum generator and the water will be sucked into the waste tank. The vacuum generator will not start when the waste tank is full.

(k)Slowly insert high pressure hose further into vacuum waste line, by moving it forward and backward until vacuum waste line connection of next toilet or waste tank is reached.

NOTE : The approx. position of the spray nozzle can be localized by the noise inside the vacuum waste line. To hear the noise you must be in the FWD or AFT cargo compartment.

(l)If vacuum blower stops, drain waste tank (Ref. 12-16-38, P. Block 1).

(m)Stop high pressure water supply and pull high pressure hose back to initial position.

(n)Repeat cleaning procedure for this vacuum waste line section as necessary.

(p)Remove high pressure hose from waste line.

(q)Remove protective covers from the toilet floor and surrounding carpet.

(r)If necessary install toilet assy and connect waste line to toilet assy (Ref. 38-35-13, P. Block 401).

(s)Repeat cleaning procedure in the next lavatory until all vacuum waste lines are cleaned.

NOTE : Totally blocked or vacuum waste lines which cannot be reached with the high pressure hose must be removed and cleaned separately.

(3)Close-up

(a)Inspect all vacuum waste line connections for leakage.

NOTE : Leakage is not permitted.

(b)Install AFT cargo compartment linings (Ref. 25-55-10, P. Block 201).

(c)Install FWD cargo compartment linings (Ref. 25-54-10, P. Block 201).

(d)Install toilet shroud (Ref. 25-45-11, P. Block 401).

(e)Drain and flush waste tank (Ref. 12-16-38, P. Block 1).

(f)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

(g)De-energize aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

F. Special Cleaning of Waste Tank Area and Related Component Inspections

(1)Job Set-Up

(a)Connect the electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).

(b)Make certain that the electronics racks ventilation is correct.

(c)Position the access platform at AFT cargo compartment door (Z812).

(d)Open the AFT cargo compartment door (Z812) and secure with the safety lock (Ref. 52-30-00, P. Block 301).
(e)Open the access door (162AZ).
(f)Remove the waste tank(s) (Ref. 38-35-11, P. Block 401).
(g)Remove the insulation blankets from the contaminated area (Ref. 25-50-21, P. Block 401).

(2)Cleaning
(a)Clean the contaminated area and the waste tank(s) area (Ref. 12-21-12, P. Block 201).
(b)Clean the aircraft structure with cleaning agents (Material No. 11-003) and follow the recommendations as given in (Ref. SRM 51-78-40, P. Block 1).

(3)Disinfection
(a)Disinfect the contaminated area and the waste tank(s) area (Ref. 25-00-00, P. Block 301).
(b)After disinfection, dry the area and the compartment floor with air at 40 deg. C (104.00 deg. F).

(4)Inspection
(a)Do an inspection of the insulation blankets.
1 If the blankets are contaminated, replace them (Ref. 25-50-21, P. Block 401).
(b)Do an inspection of the outflow valve.
1 If contamination is found, replace the outflow valve (Ref. 21-31-12, P. Block 401).
(c)Do an inspection of the waste dump valve(s).
1 If contamination is found, replace the waste dump valve(s) (Ref. 38-35-17, P. Block 401).
(d)Do an inspection of the vacuum blower(s).
1 If contamination is found, replace the vacuum blower(s) (Ref. 38-35-15, P. Block 401).
(e)Do an inspection of the logic control unit(s).
1 If contamination is found, replace the logic control unit(s) (Ref. 38-35-31, P. Block 401).
(f)Do an inspection of the water separator(s).
1 If contamination is found, replace the water separator(s) (Ref. 38-35-31, P. Block 401).
(g)Do an inspection of the waste level sensors.
1 If contamination is found, replace the waste level sensors (Ref. 38-35-32, P. Block 401).

(5)Close-Up
(a)Install the insulation blankets.
(b)Install the waste tank(s) (Ref. 38-35-11, P. Block 401).
(c)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(d)Close the access door (162AZ).
(e)Close the AFT cargo compartment door (Z812) (Ref. 52-30-00, P. Block 301).
(f)Remove the access platform.
(g)De-energize the aircraft electrical network and disconnect the electrical ground power unit (Ref. 24-41-00, P. Block 301).

G. Cleaning of the Toilet Waste Lines with High Pressure Equipment VACLAV 2

WARNING : ALWAYS PUT ON RUBBER GLOVES, GOGGLES AND PROTECTIVE CLOTHES TO PREVENT INFECTION WHEN YOU DO THIS WORK.

(Ref. Fig. 701)
(Ref. Fig. 702)
(Ref. Fig. 703)

(1)Job Set-Up
(a)Connect electrical ground power unit and energize the aircraft electrical network (Ref. 24-41-00, P. Block 301).
(b)Make certain that electronics racks ventilation is correct.
(c)make sure that the following circuit breakers are closed.

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

WARNING : FOR HEALTH REASONS, ALWAYS WEAR RUBBER GLOVES WHEN HANDLING.

(d)Remove toilet shroud (Ref. 25-45-11, P. Block 401).
(e)Close the water shutoff valves in the lavatories.
(f)Disinfect the toilet assemblies:

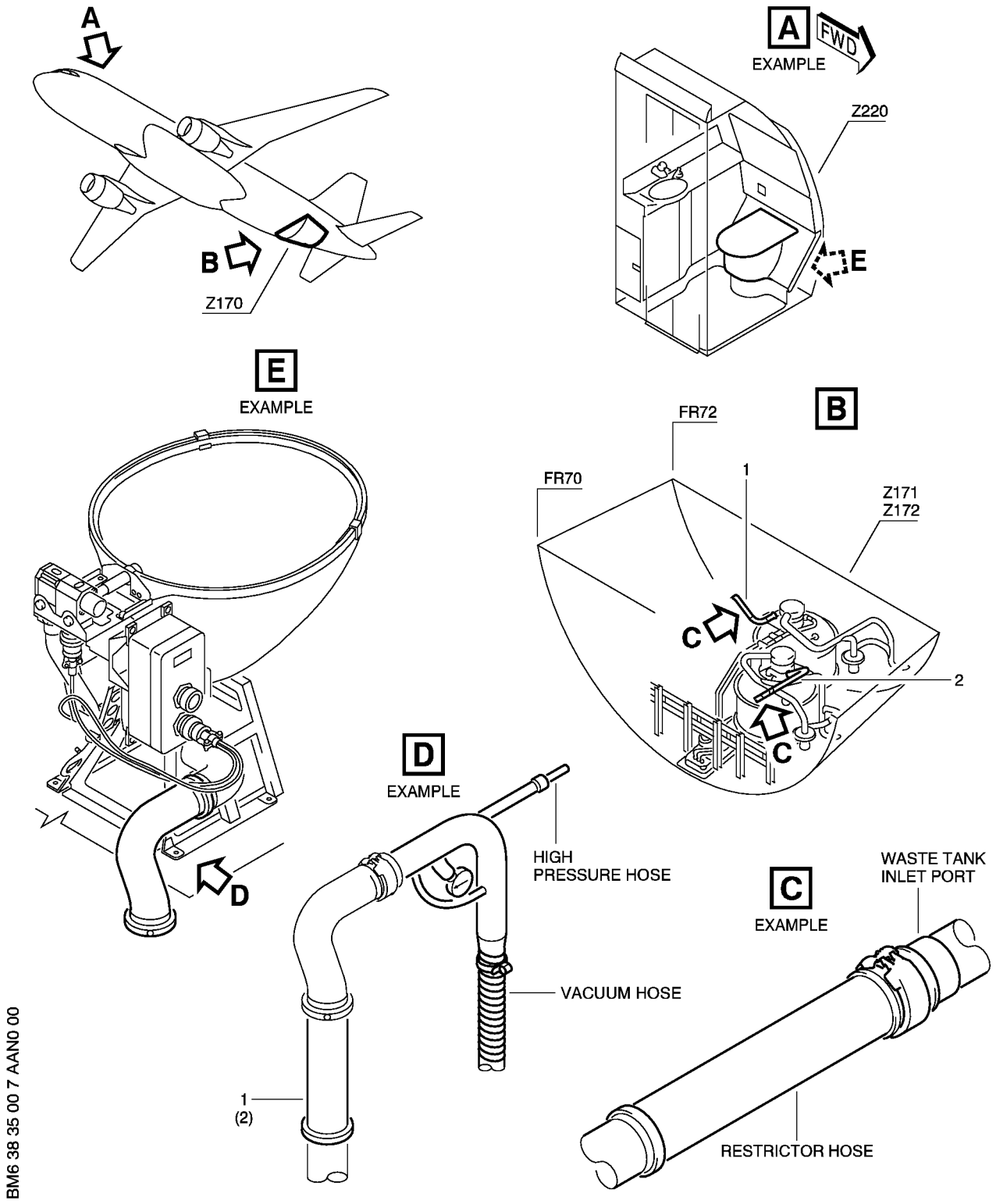
WARNING : OBEY THE MANUFACTURER'S INSTRUCTIONS WHEN YOU USE THE SPECIAL MATERIAL. THIS MATERIAL IS DANGEROUS.

1 Put 4.5 l (1.1887 USgal) of DISINFECTANTS (Material No. 14-001A) in each toilet assembly on the two sides of the aircraft.
2 Flush the toilet assemblies.
3 Apply DISINFECTANTS (Material No. 14-501) to the toilet bowl, the flush valves and other conaminated areas.

NOTE : If a toilet waste line is blocked, it is necessary to remove and clean the line before you can continue this procedure.

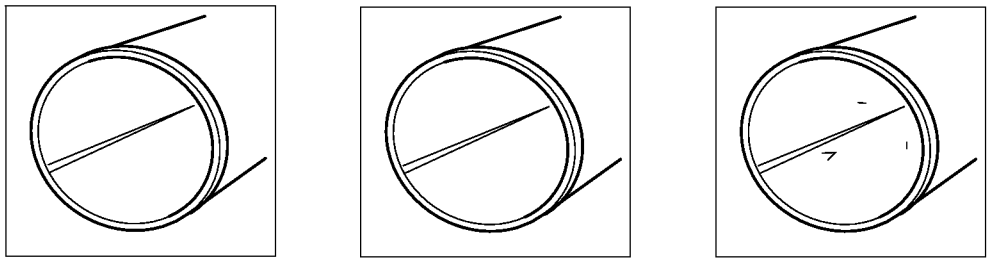
(g)Drain the waste holding tanks (Ref. 12-16-38, P. Block 1).
(h)Put plastic sheets on the floor of the lavatory and the adjacent area to give protection the floor coverings.
(j)Disconnect only one of the forward toilet assemblies from the aircraft waste system.
(k)Remove the short waste line (1) or (2) of the related waste tank inlet port.

(2)Inside Inspection of Waste Lines



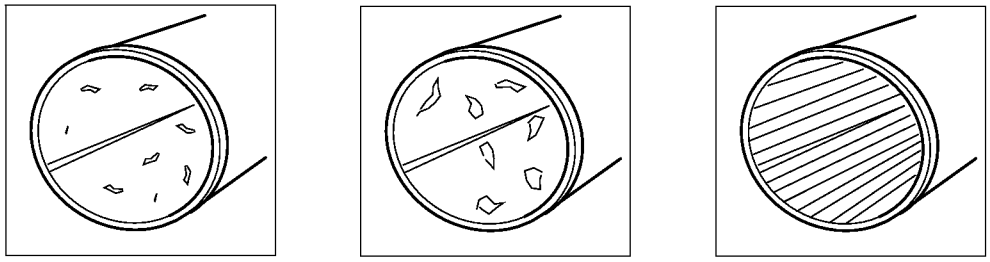
Adapter and Restrictor Arrangement
Figure 701

WASTE LINE CONDITIONS



DARK TYPE < NEW > LIGHT TYPE

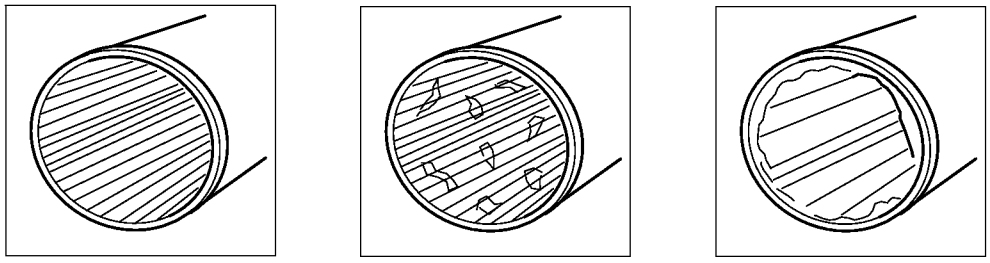
CONDITION 1 / FILM



CONDITION 1 LOOSE RESTS

CONDITION 2 SOME PRICKLES

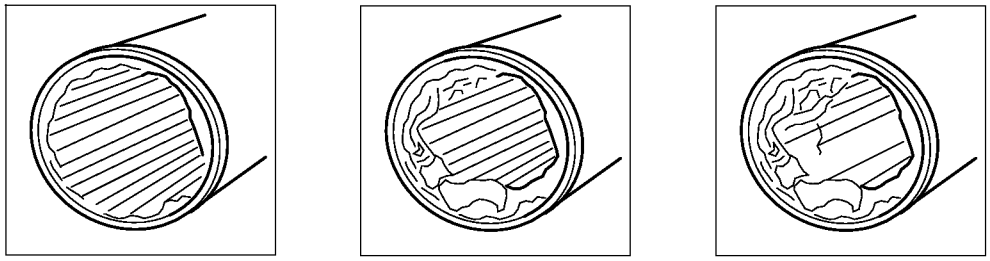
CONDITION 3 THICKER FILM



CONDITION 4 CLOSED LAYER

CONDITION 5

CONDITION 6



CONDITION 7

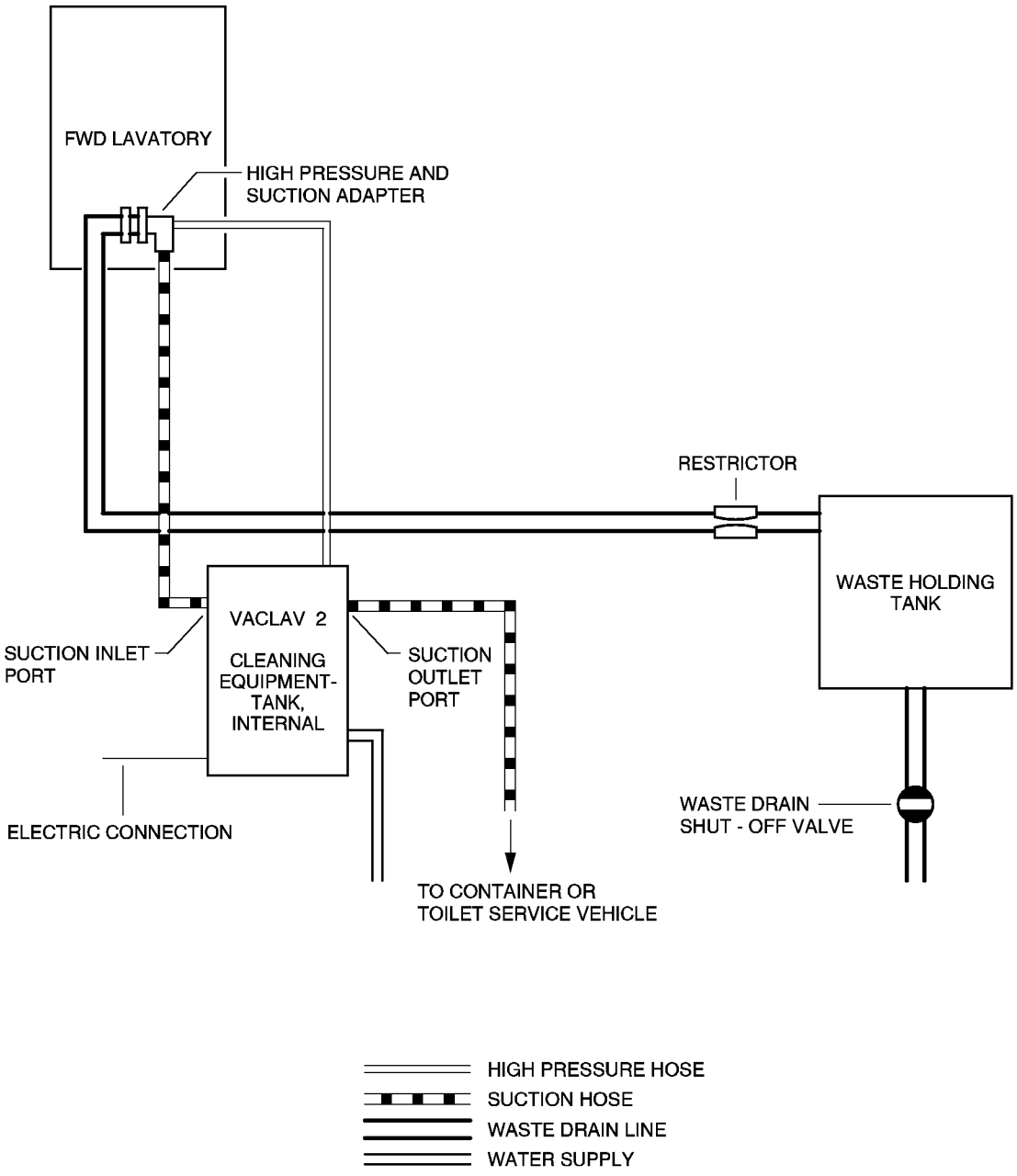
CONDITION 8

CONDITION 9

BM6 38 35 00 7 AAP0 00

R

Waste-Line Condition Schematic
Figure 702



BM6 38 35 00 7 AAB0 00

R

VacLav 2 Schematic
Figure 703

(a)Use a **BORESCOPE DIA 25.0 (1.0 IN) - FLEXIBLE** and do the inspection of the waste lines.
(b)If the contamination is as shown in condition 1 to 5, the cleaning is not necessary.

(3)Cleaning of the Toilet Waste Lines

WARNING : ALWAYS PUT ON RUBBER GLOVES, GOGGLES AND PROTECTIVE CLOTHES TO PREVENT INFECTION WHEN YOU DO THIS WORK.

CAUTION : MAKE SURE THAT THE WATER TEMPERATURE IS NOT HIGHER THAN 60 DEG.C (140.00 DEG.F). IF IT IS HIGHER, IT CAN CAUSE DAMAGE TO THE COMPONENT.

NOTE : It is necessary to start the procedure at the forward toilet.

(a)Install the removed waste line (1) or (2) to the waste line of the removed toilet assembly.

NOTE : It is not necessary to disconnect the electrical connectors for this procedure.

(b)Put the **CLEANING EQUIPMENT VACLAV 2 - TANK, INTERNAL** in position at the forward area of the airplane.
(c)Clean the toilet waste lines.
(d)Preparation of the High Pressure Cleaner and the Vacuum Pump
1 Install the suction and presssure adapter on the waste line from the toilet assembly.

NOTE : It is necessary to do the cleaning only in the direction of the waste holding tank.

2 Install the restrictor hose assembly between the waste line and the waste inlet port.
3 Attach the suction hose of the high pressure cleaner to the suction and pressure adapter.
4 Attach the high pressure hose of the high pressure cleaner to the spray nozzle of the suction and pressure adapter.
5 Turn the main switch of the vacuum service vehicle and that of the high pressure pump to the **ON** position.
6 Operation of the High Pressure Cleaning Equipment
- Let the vacuum pressure increase until it is between 250 mbar (3.62 psi) and 270 mbar (3.91 psi).
- Operate the high-pressure water pump at a maximum pressure of 400 bar (5801.05).

(e)Slowly push the high pressure hose assembly at a rate of approximately 1 m/min into the waste line until it is near the restrictor hose.
(f)Stop the high-pressure water pump when it is near the restrictor hose at the other end of the waste line.

1 While the vacuum source continues to operate:
- Slowly retract the high pressure hose from the waste line.

2 Stop the vacuum source.

(g)Do a boroscope inspection.

(h)If the boroscope inspection shows that the cleaning is not satisfactory:
- Do the cleaning procedure a second time.

(4)Close-Up

(a)Remove the high pressure hose.

(b)Remove the suction hose.

(c)Remove the suction and pressure adapter and the waste line (1) or (2).

(d)Connect the toilet assembly to the waste line.

(e)Remove the restrictor hose assembly from the waste line.

(f)Put the waste line (1) or (2) in position.

(g)Connect the waste holding tank to the waste line.

(h)Install the toilet shoud (Ref. 25-45-11, P. Block 401).

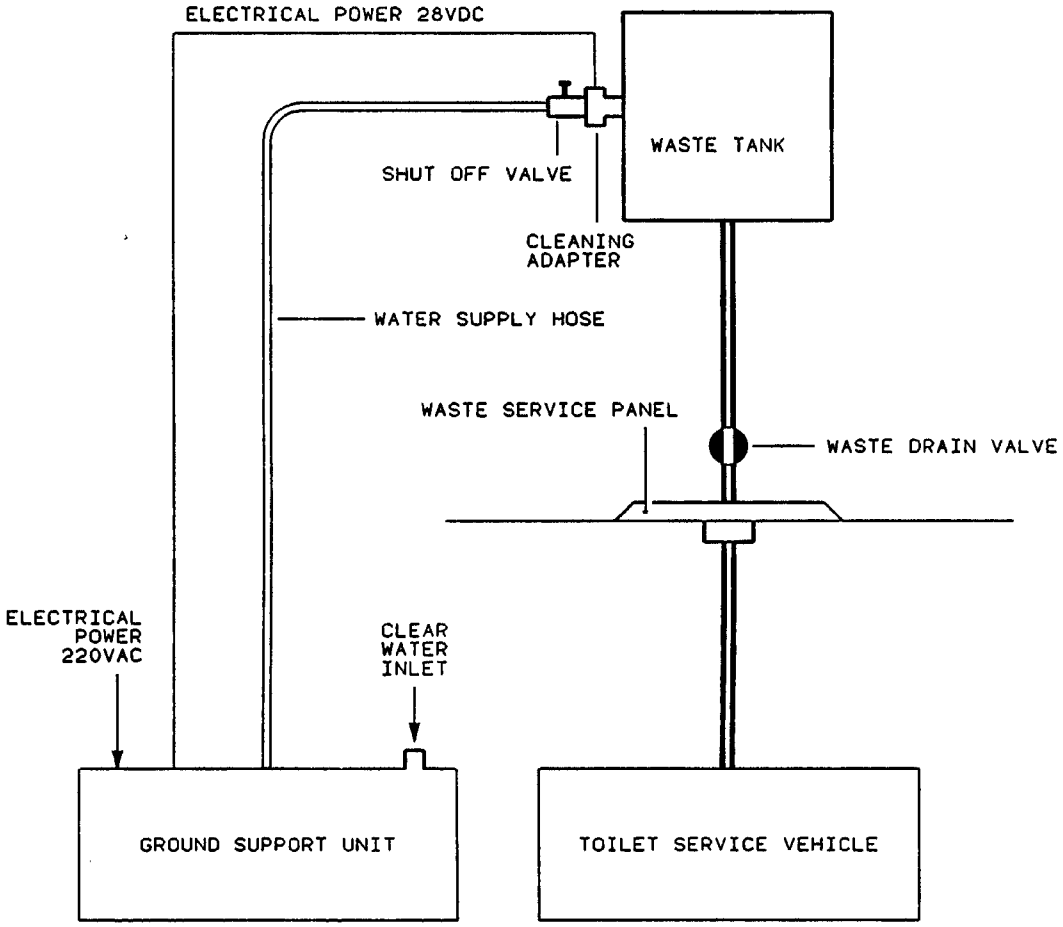
(j)Remove the container.

(k)Make sure that the work area is clean and clear of tools and other items.

(m)De-energize aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

(5)Test

(a)Do the leak check of the vacuum system (Ref. TASK 38-31-00-790-801), and examine the connections for leaks. Leaks are not permitted. Do a functional test of the toilet assemblies (Ref. TASK 38-31-00-720-802).



BM6 38 35 00 7 AAM0 01

Waste Tank Cleaning
Figure 704

WASTE TANK - REMOVAL/INSTALLATION

1. Reasons for the Job

A. Removal for replacement

B. Removal for repair

C. Removal for replacement or repair of fixed partition.

2. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.3 m (7.50 ft.)
B.	Blanking Caps
C.	Circuit Breaker Safety Clips and Tags

Referenced Procedures

- 12-16-38, P. Block 1	Replenishing Toilets
- 20-28-11, P. Block 1	Electrical Bonding
- 38-35-00, P. Block 501	Vacuum Toilet System
- 38-35-15, P. Block 401	Vacuum Blower
R - 38-35-17, P. Block 401	Waste System Dump Valve
- 38-35-19, P. Block 401	Bypass Check Valve - Vent Line
- 38-35-29, P. Block 401	Waste Separator
- 38-35-32, P. Block 401	Waste Level Sensor
- 51-75-10, P. Block 801	Repair of Paint Coatings
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
- 53-10-59, P. Block 401	BULK Cargo Compartment Fixed Partition

3. Procedure

A. Job Set-Up

(1)Drain and flush waste tank (Ref. 12-16-38, P. Block 1).

NOTE : Do not prime waste tank at this stage.

(2)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(3)Position access platform at AFT cargo compartment door (Z812).

(4)Open AFT cargo compartment door (Z812) and secure with safety lock (Ref. 52-30-00, P. Block 301).

(5)Open access door (162AZ).

(6)Remove overboard vent lines (Ref. 38-35-19, P. Block 401).

(7)Remove vacuum blower (Ref. 38-35-15, P. Block 401).

(8)Remove waste level sensor (Ref. 38-35-32, P. Block 401).
(9)Disconnect and cap flush lines (7) from waste tank (6).
(10)Disconnect and cap waste lines (5) from waste tank (6).
(11)Remove waste separator (Ref. 38-35-29, P. Block 401).
(12)Remove waste system dump valve (Ref. 38-35-17, P. Block 401).
(13)Remove RH fixed partition in area of access door (162AZ) (Ref. 53-10-59, P. Block 401).

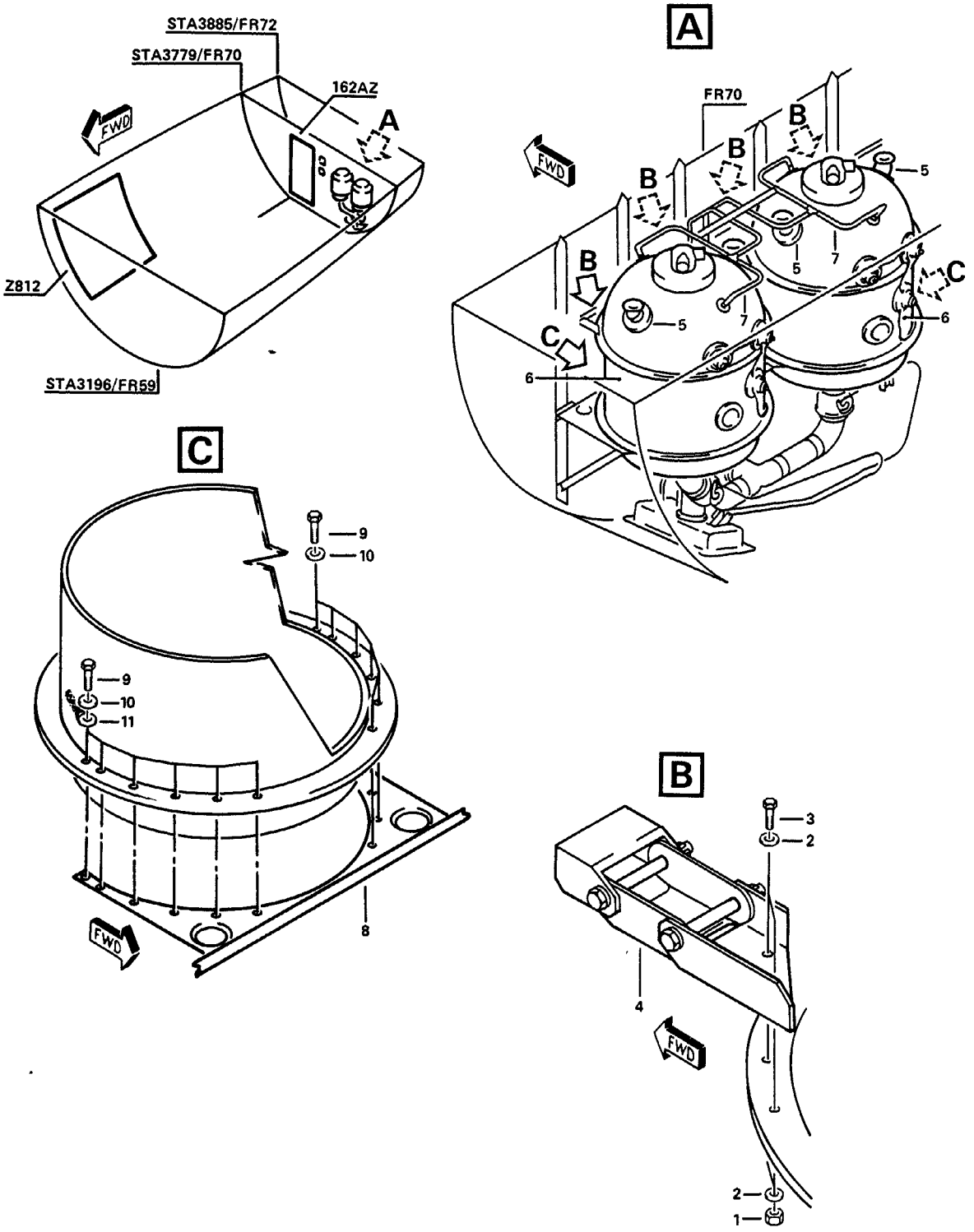
B. Removal
(Ref. Fig. 401)
(1)Removal of Waste Tanks (6).
(a)Remove nuts (1), washers (2) and bolts (3) from brackets (4).
(b)Remove bolts (9), washers (10) and bonding strap (11) from console (8).
(c)Remove waste tanks (6).

C. Preparation for Installation
(1)Make certain that installation area is clean and clear of tools and miscellaneous items of equipment.
(2)Check anchor nuts on console (8) for damage and replace, if necessary.
(3)Check paint coatings in area of waste tanks for good condition and repaint, if necessary (Ref. 51-75-10, P. Block 801).

D. Installation (Ref. Fig. 401)
NOTE : For electrical bonding procedure, refer to 20-28-11, P. Block 1.
(1)Position waste tanks (6) to consoles (8).
(2)Install washers (10), bolts (9) and bonding strap (11).
(3)Position brackets (4) and install bolts (3), washers (2) and nuts (1).
(4)Install waste system dump valve (Ref. 38-35-17, P. Block 401).
(5)Install waste separator (Ref. 38-35-29, P. Block 401).
(6)Remove blanking caps from disconnected waste lines (5) and connect waste lines to waste tanks (6).
(7)Remove blanking caps from disconnected flush lines (7) and connect flush lines to waste tanks (6).
(8)Install waste level sensors (Ref. 38-35-32, P. Block 401).
(9)Install vacuum blower (Ref. 38-35-15, P. Block 401).
(10)Install overboard vent lines (Ref. 38-35-19, P. Block 401).

E. Test
(1)Carry out vacuum toilet system test (Ref. 38-35-00, P. Block 501).

F. Close-Up
(1)Install RH fixed partition (Ref. 53-10-59, P. Block 401).
(2)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(3)Close access door (162AZ).
(4)Remove safety lock (Ref. 52-30-00, P. Block 301) and close AFT cargo compartment door (Z812).
(5)Remove access platform.
(6)Remove safety clips and tags and close circuit breakers 111MG, 11MG, 110MG and 10MG.



B M 6 38 35 11 4 AA M 0-23

Waste Tank
Figure 401

(7)Replenish waste tanks (Ref. 12-16-38, P. Block 1) if necessary.

TOILET ASSY - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps
B.	Circuit Breaker Safety Clips and Tags
C.	Electrical Ground Power Unit, 3-Phase 115/200 V, 100 Hz
D.	O-Rings

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 25-45-11, P. Block 401	Toilet Shroud
- 38-40-00, P. Block 301	Air Supply

2. Procedure

A. Job Set-Up

(1)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(2)Close manual shutoff valve in sanitary unit cabinet.

(3)Remove toilet shroud (Ref. 25-45-11, P. Block 401).

B. Removal

(Ref. Fig. 401)

(1)Remove toilet assy as follows:

NOTE : The removal of all toilet assy is similar therefore only the removal of one toilet assy is described.

(a)Remove clamshell (4) and slide sleeve (3) over tube (5).

NOTE : Quick-disconnect action of the clamshell (4) enables assembly/removal by one hand. All three latch pawls must be lifted simultaneously to disengage the latch.

(b)Disconnect electrical plug (6).

(c)Disconnect potable water line (7).

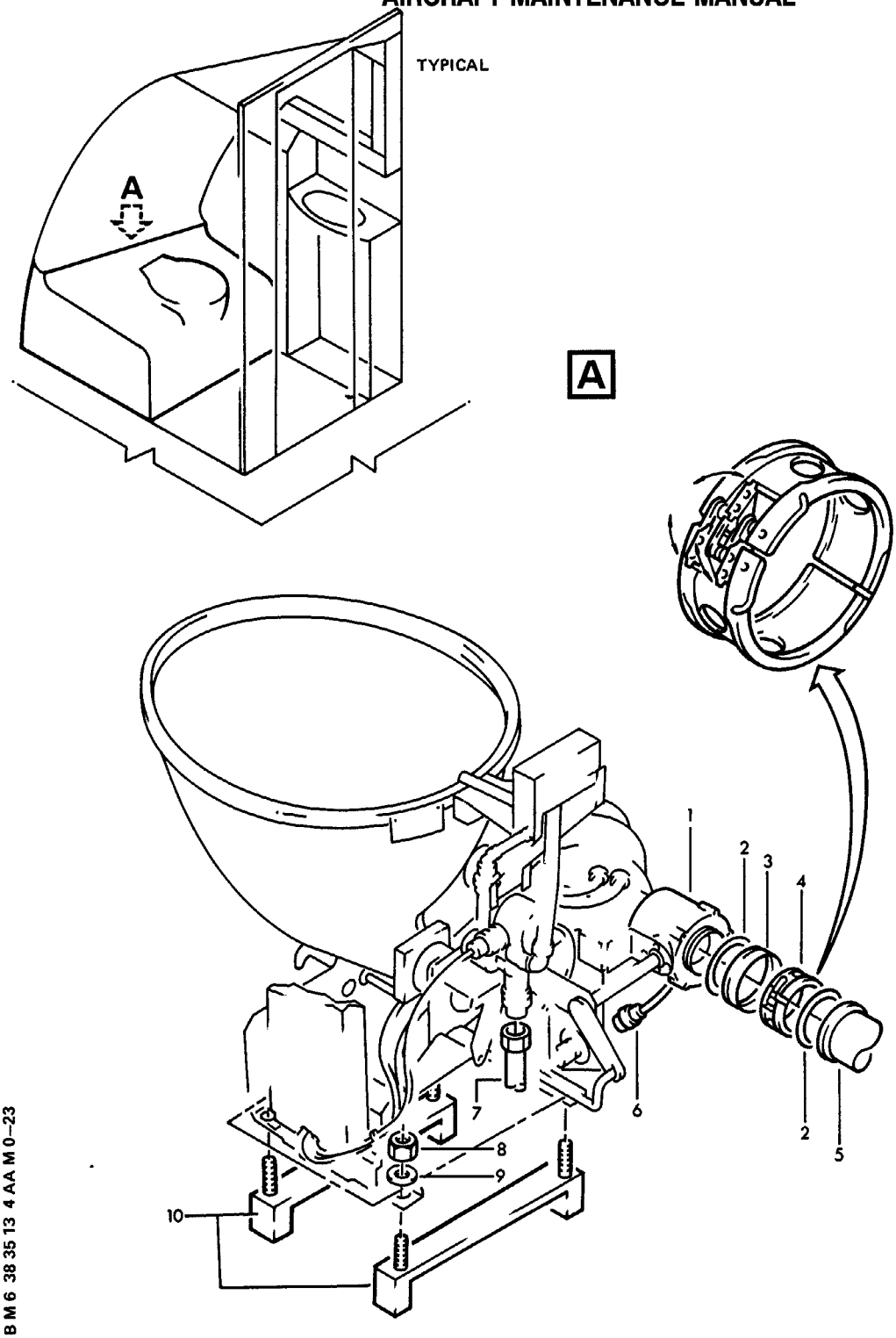
(d)Remove nuts (8) with washers (9).

(e)Lift toilet assy from toilet mounting (10).

(f)Remove sleeve (3) from tube (5).

(g)Remove and discard O-rings (2).

(h)Install blanking caps to tube (5), shutoff valve (1), and potable water line (7).



B M 6 38 35 13 4 AA M 0-23

Toilet Assy
Figure 401

C. Preparation for Installation
(1)Make certain that toilet assy is clean and no external damage is visible.
(2)Make certain that installation area is clean and clear of tools and miscellaneous items of equipment.

D. Installation (Ref. Fig. 401)
(1)Remove blanking caps from tube (5), shutoff valve (1), and potable water line (7).
(2)Install new O-ring (2) to shutoff valve (1).
(3)Install new O-ring (2) to tube (5) and slide sleeve (3) over tube.
(4)Position toilet assy on toilet mounting (10).
(5)Slide sleeve (3) over O-rings (2) and install clamshell (1).
(6)Install washers (9) and nuts (8).
(7)Connect potable water line (7).
(8)Connect electrical plug (6).

E. Test
(1)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(2)Make certain that electronics racks ventilation is correct.
(3)Replenish potable water system (Ref. 12-15-38, P. Block 1), if necessary and pressurize water system (Ref. 38-40-00, P. Block 301).
(4)Remove safety clips and tags and close circuit breaker 10MG, 110MG, 11MG and 111MG.
(5)Open manual shutoff valve in sanitary unit cabinet.
(6)Inspect potable water line connection for leakage.
NOTE : Leakage is not permissible.
(7)Flush toilet assy a few times and check for normal operation.
(8)Inspect waste line connection for leakage.
NOTE : Leakage is not permissable.
(9)Depressurize air supply system (Ref. 38-40-00, P. Block 301).

F. Close-Up
(1)Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.
(2)Install toilet shroud (Ref. 25-45-11, P. Block 401).
(3)De-energize aircraft electrical network (Ref. 24-41-00, P. Block 301) and disconnect ground power unit.
(4)Drain potable water system (Ref. 12-24-38, P. Block 1), if necessary.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps
B.	Circuit Breaker Safety Clips and Tags
C.	Electrical Ground Power Unit, 3-Phase 115/200 V, 100 Hz
D.	Container - Capacity 2 l (0.53 US gal.)
E.	Torque wrench, up to 5.9 m.daN (45.51 lbf.ft)
F.	Lint-free cloth
G.	O-Rings
H. Material No. 04-008	Common Grease (Ref. 20-31-00)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 24-41-00, P. Block 301	AC External Power Control
- 25-45-11, P. Block 401	Toilet Shroud
- 38-40-00, P. Block 301	Air Supply

2. Procedure

A. Job Set-Up for lavatory A, T, W, Y and Z

(1)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(2)Open sanitary unit cabinet door in the appropriate lavatory.
(3)Close water shutoff valve.
(4)Remove toilet shroud (Ref. 25-45-11, P. Block 401).
(5)Place container under potable water line.

B. Job Set-Up for lavatory X

(1)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

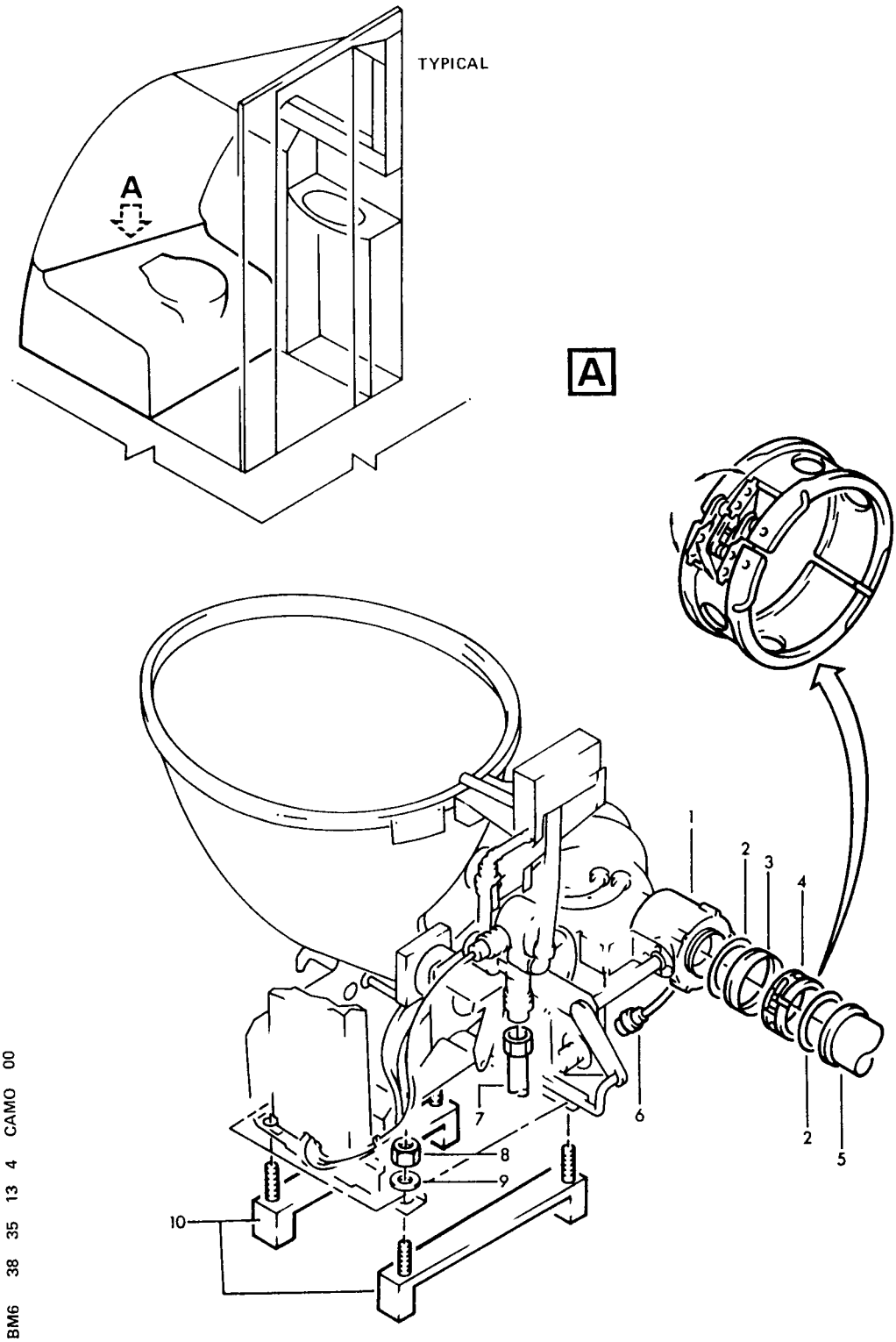
(2)Open access panel of water shutoff valve.
(3)Close water shutoff valve.

(4)Remove toilet shroud (Ref. 25-45-11, P. Block 401).
(5)Place container under potable water pipe.

C. Removal
(1)Removal of toilet assy from lavatory A, T, W, Y and Z
(Ref. Fig. 401)
NOTE : The removal of all the toilet assies is similar, therefore only the removal of one toilet assy is described.
(a)Disconnect electrical connector (6).
(b)Put blanking caps on disconnected electrical connectors.
(c)Disconnect potable water pipe (7).
NOTE : Approximately 1.5 l (0.3962 US gal.)of water will drain from potable water pipe (7).
(d)Remove clamshell (4) and slide sleeve (3) over tube (5).
NOTE : The quick-disconnect action of the clamshell (4) enables the assembly/removal by one hand. All three latch pawls must be lifted simultaneously to disengage the latch.
(e)Remove nuts (8) and washers (9).
(f)Lift toilet assy from toilet mounting (10).
(g)Remove sleeve (3) from tube (5).
(h)Remove and discard O-rings (2).
(j)Install blanking caps to tube (5), shutoff valve (1) and potable water pipe (7).
(2)Removal of toilet assy from lavatory X (Ref. Fig. 402)
(a)Disconnect electrical connector (2).
(b)Put blanking caps on disconnected electrical connectors.
R (c)Remove nut (11) and washers (9) to disconnect bonding
R strap (10) from bolt (8).
(d)Disconnect potable water pipe (6).
NOTE : Approximately 1.5 l (0.3962 US gal.)of water will drain from potable water pipe (6).
(e)Remove clamshell (13) and slide sleeve (14) over tube (3).
NOTE : The quick-disconnect action of the clamshell (13) enables the assembly/removal by one hand. All three latch pawls must be lifted simultaneously to disengage the latch.
(f)Remove bolts (4) and washers (5).
(f)Lift toilet assy (1) from lavatory floor.
(g)Remove sleeve (14) from tube (3).
(h)Remove and discard O-rings (12).
(j)Install blanking caps to tube (3) and potable water pipe (6).

D. Preparation for Installation
(1)Make certain that toilet assy is clean and no external damage is visible.
(2)Remove all blanking caps from pipes, tubes and electrical connectors.
(3)Apply grease (Mat. No. 04-008) to all new O-rings.

E. Installation
(1)Installation of toilet assy for lavatory A, T, W, Y and Z



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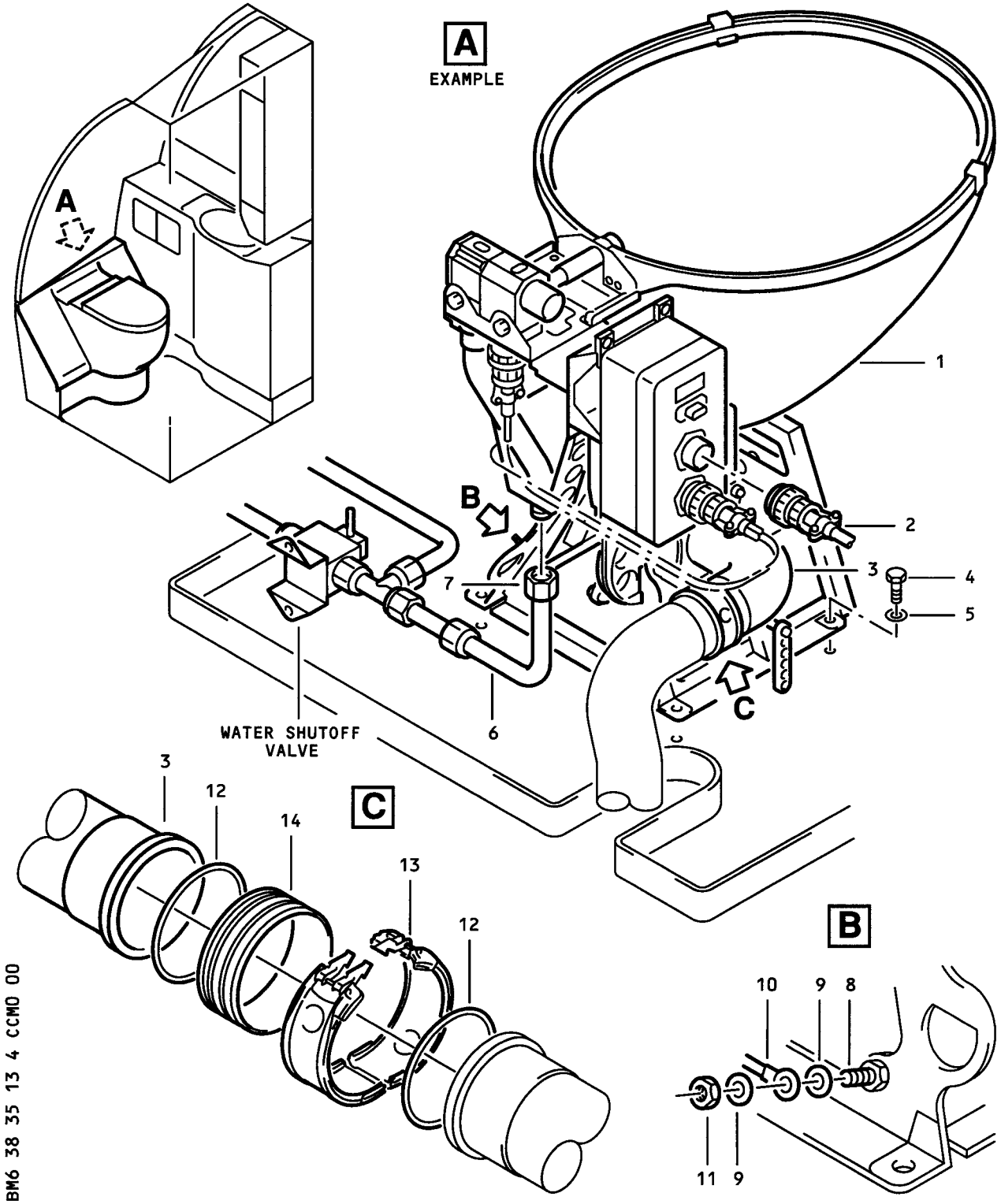
Toilet Assy
Figure 401



Toilet Assy
Figure 402

(Ref. Fig. 401)

NOTE : The installation of all the toilet assies is similar, therefore only the installation of one toilet assy is described.

(a)Install a new O-ring (2) to shutoff valve (1).
(b)Install a new O-ring (2) to tube (5).
(c)Slide sleeve (3) over tube (5).
(d)Put toilet assy in position on toilet mounting (10).
(e)Slide sleeve (3) over O-rings (2)
(f)Install clamshell (4).
(g)Connect potable water pipe (7).
(h)Install washers (9) and nuts (8).
(j)Connect electrical plug (6).

(2)Installation of toilet assy for lavatory X (Ref. Fig. 402)
(a)Install new O-rings (12) to tubes (3).
(b)Slide sleeve (14) over tube (3).
(c)Put toilet assy (1) in position on lavatory floor.
R (d)Slide sleeve (14) over O-rings (12)
(e)Install clamshell (13).
(f)Connect potable water pipe (6).
(g)TORQUE nut (7) to 5.9 m.daN (43.51 lbf ft.) maximum.
(h)Install washers (5) and bolts (4).
(j)Connect electrical plug (2).
R (k)Put washers (9) and bonding strap (10) in position and install
R nut (11) to connect bonding strap (10).

F. Test

(1)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(2)Replenish potable water system (Ref. 12-15-38, P. Block 1), if necessary.
(3)Pressurize water system (Ref. 38-40-00, P. Block 301).
(4)Remove safety clips and tags and close circuit breaker 10MG, 110MG, 11MG and 111MG.
(5)Open water shutoff valve.
(6)Inspect potable water pipe connection for leaks.
NOTE : Leaks are not permitted.
(7)Flush toilet assy a few times and check for normal operation.
(8)Inspect waste tube connections for leaks.
NOTE : Leaks are not permitted.
(9)Depressurize water system (Ref. 38-40-00, P. Block 301).

G. Close-Up for lavatory A, T, W, Y and Z

(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Remove container.
(3)Clean and dry the work area with a clean lint-free cloth.
(4)Install toilet shroud (Ref. 25-45-11, P. Block 401).
(5)Close sanitary unit cabinet door of the appropriate lavatory.
(6)De-energize aircraft electrical network (Ref. 24-41-00, P. Block 301) and disconnect ground power unit.

R H. Close-Up for lavatory X
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Remove container.
(3)Clean and dry the work area with a clean lint-free cloth.
(4)Install toilet shroud (Ref. 25-45-11, P. Block 401).
(5)Close access panel of water shutoff valve.
(6)De-energize aircraft electrical network (Ref. 24-41-00, P. Block 301) and disconnect ground power unit.

VACUUM TOILET BOWL - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps
B.	Circuit Breaker Safety Clips and Tags
C.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
D.	Packing
E.	Torque Wrench, up to 17 m.daN (150 lbf.in.)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 24-41-00, P. Block 301	AC External Power Control
- 25-45-11, P. Block 401	Toilet Shroud
- 38-35-25, P. Block 401	Antisyphon Valve
- 38-40-00, P. Block 301	Air Supply

2. Procedure

A. Job Set-Up

(1)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(2)Close manual shutoff valve in sanitary unit cabinet.

(3)Remove toilet shroud (Ref. 25-45-11, P. Block 401).

B. Removal

(Ref. Fig. 401)

(1)Disconect the antisyphon valve assembly from the toilet bowl (Ref. 38-35-25, P. Block 401).

NOTE : The removal of the toilet bowl in all toilet assemblies is similar, therefore, only the removal of one toilet bowl is described and applies to LH and RH toilet assemblies.

(2)Remove the nuts (4) the bolts (2) and the washers (3).

(3)Remove the nut (6) the bolt (5) and the washers (7).

(4)Remove the toilet bowl (1) from the toilet assembly mounting (9).

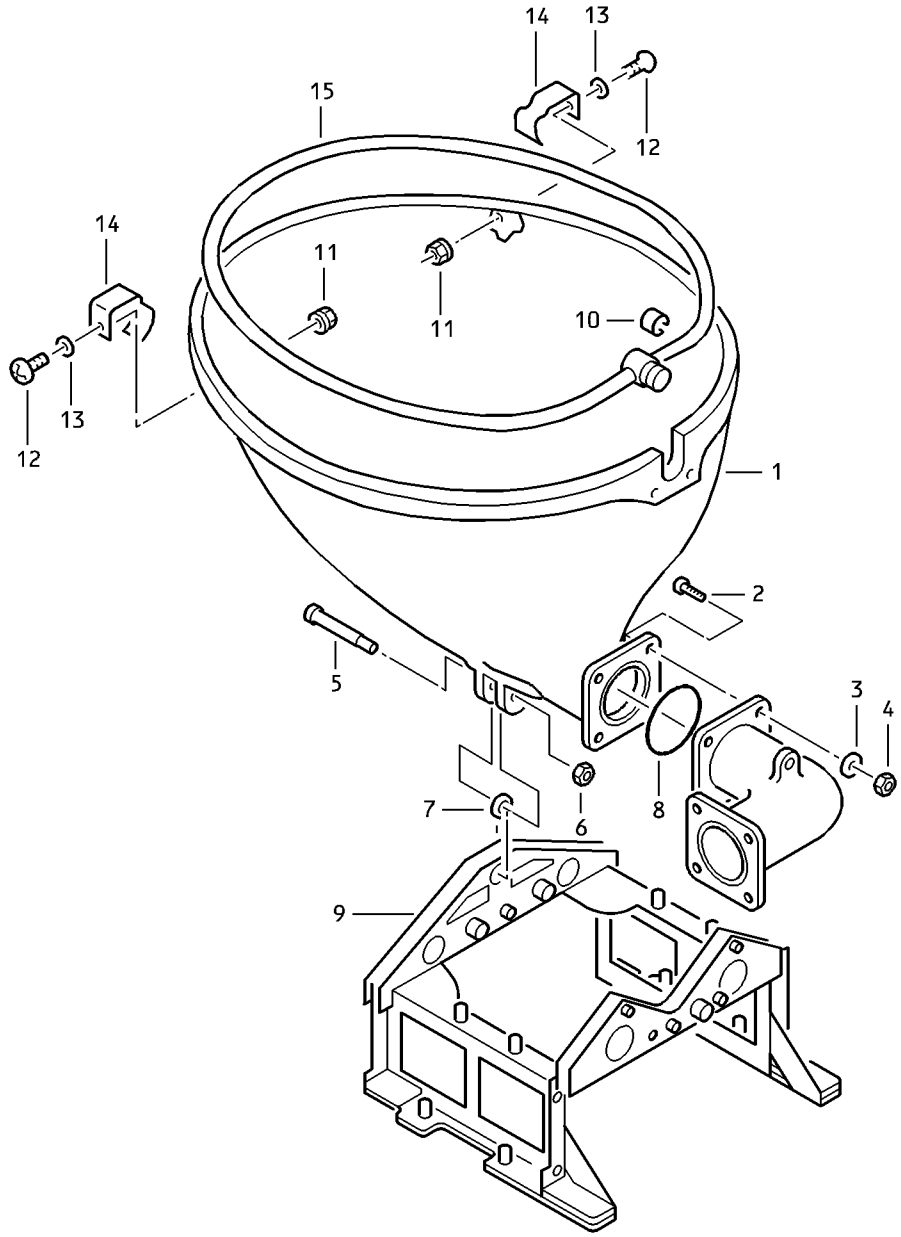
(5)Remove and discard the packing (8).

(6)If necessary remove the spray ring.

(a)Remove the nuts (11) the bolts (12) the washers (13) and the retaining clips (14).

(b)Lift the spray ring (15) out of the toilet bowl (1).

(c)Remove the spacer (10).



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Vacuum Toilet Bowl
Figure 401

C. Preparation for Installation
(1)Make sure that all the parts are clean and there is no visible damage.
(2)Make certain that the installation area is clean and clear of tools and miscellaneous items of equipment.

D. Installation (Ref. Fig. 401)
(1)If necessary install the spray ring.
(a)Install the the spacer (10) on the spray ring (15).
(b)Put the spray ring (15) in position on the toilet bowl (1).
(c)Install the bolts (12) the washers (13) the nuts (11) and the retaining clips (14).
(2)Install the new packing (8) on the flange of the toilet bowl (1).
(3)Position the toilet bowl (1) on the toilet assembly mounting (9).
R (4)Install the bolts (2) the washers (3) and the nuts (4).
R (5)TORQUE nuts (4) to 80 lbf.in. (9.04 m.daN).
R (6)Install the bolt (5) the washers (7) and the the nut (6).
R NOTE : Use the washers (7) as spacers to fill the gaps between the toilet assembly mounting (9) and the mounting lug of the toilet bowl assembly (1).
R (7)TORQUE nuts (6) to 150 lbf.in. (16.95 m.daN).
(8)Reconect the antisyphon valve assembly to the toilet bowl.

R **ON A/C 001-100,

E. Test
(1)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(2)Make certain that electronics racks ventilation is correct.
(3)Replenish portable water system (Ref. 12-15-38, P. Block 1).
(4)Pressurize water system (Ref. 38-40-00, P. Block 301).
(5)Remove safety clips and tags and close circuit breakers 10MG, 110MG, 11MG and 111MG.
(6)Check through inspection hole in antisyphon valve that spring is extended.
(7)Open manual shutoff valve in sanitary unit cabinet.
(8)Check through inspection hole in antisyphon valve that spring is compressed.
(9)Flush toilet assy a few times and check for normal operation.
(10)Inspect all previously disconnected connections for leakage.
NOTE : Leakage is not permissible.

R **ON A/C 101-200,

R E. Test
R (1)Connect electrical ground power unit and energize aircraft electrical
R network (Ref. 24-41-00, P. Block 301).
R (2)Make certain that electronics racks ventilation is correct.
R (3)Replenish portable water system (Ref. 12-15-38, P. Block 1).
R (4)Pressurize water system (Ref. 38-40-00, P. Block 301).

R (5)Remove safety clips and tags and close circuit breakers 10MG, 110MG, 11MG and 111MG.
R (6)Open manual shutoff valve in sanitary unit cabinet.
R (7)Flush toilet assy a few times and check for normal operation.
R (8)Inspect all previously disconnected connections for leakage.
R NOTE : Leakage is not permissible.

R **ON A/C ALL

F. Close-Up
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Install toilet shroud (Ref. 25-45-11, P. Block 401).
(3)De-energize aircraft electrical network (Ref. 24-41-00, P. Block 301) and disconnect ground power unit.
NOTE : Leakage is not permissible.

FILTER ASSEMBLY - SERVICING

WARNING : ALWAYS WEAR RUBBER GLOVES, GOGGLES AND PROTECTIVE CLOTHES WHEN YOU DO THIS PROCEDURE.
WARNING : DETERGENT IS DANGEROUS. MANUFACTURER'S RECOMMENDATIONS MUST BE STRICTLY ADHERED TO.
CAUTION : WATER FLUSHING PRESSURE MUST NOT BE MORE THAN 2.76 BAR (40 PSI).
CAUTION : TO PREVENT DAMAGE TO THE FILTER, DO NOT USE SOLVENTS OR GASOLINE TO CLEAN THE FILTER ASSEMBLY.

NOTE : There are two cleaning procedures:
Compressed air cleaning procedure.
This procedure is recommended when the filter assembly has only dust on it.
Detergent and water cleaning procedure.
This procedure is recommended when the filter assembly has a combination of dust and oil on it.

1. Reason for the Job

A. To clean the filter assembly

2. Equipment and Materials

ITEM	DESIGNATION
A.	Container 8 l (2.113 US gal.)
B.	Dry, Compressed Air
C.	Hot Air Blower, with a temperature of not more than 71.1°C (160°F)
D.	Rubber Gloves
R E. Material No. 11-001	Cleaning Agents (Ref. 20-31-00)
Referenced Procedure - 38-35-15, P. Block 401	Vacuum Blower

3. Procedure

A. Job Set-Up
(1)Compressed air cleaning procedure:
(a)Remove the vacuum blower (Ref. 38-35-15, P. Block 401).
(b)Remove the filter assembly (Ref. 38-35-15, P. Block 401).
(2)Detergent and water cleaning procedure:
(a)Remove the vacuum blower (Ref. 35-35-15, P. Block 401).
(b)Remove the filter assembly (Ref. 35-35-15, P. Block 401).
R (c)Mix 28.35 gr (1 Oz.) of detergent (Mat. No.11-001) with 7.57 l (2 US gal.) of water.

WARNING : USE THE CORRECT PROTECTION. COMPRESSED AIR WILL CAUSE LOOSE PARTICLES THAT CAN GET IN YOUR EYES. THE AIRSTREAM CAN CAUSE CUTS. DO NOT POINT THE AIRSTREAM TOWARD YOURSELF OR OTHER PERSONS.

CAUTION : TO PREVENT DAMAGE TO THE FILTER ASSEMBLY, USE COMPRESSED AIR AT A MAXIMUM OF 0.689 BAR (10 PSI.).
KEEP THE NOZZEL A MINIMUM OF 25.4 MM (1 IN.) AWAY FROM FILTER ASSEMBLY.

B. Cleaning the filter assembly

NOTE : If the filter assembly is not damaged it can be cleaned a total of 5 times.

NOTE : Check the filter for marks or dates on it. The filter must be discarded and replaced if there are 5 marks or dates on it.

(1)Compressed air Procedure

(a)Blow compressed air through the filter assembly in the opposite direction to the normal air flow, until all the dust is removed.

(b)Hold the filter assembly towards a bright light source.

(c)Check the filter assembly for tears or holes in the filter material.

(d)Check the filter assembly for damage to the foam frame.

(e)If the filter assembly is damaged discard and replace the filter assembly.

(f)If the filter assembly is not damaged put a mark or the date on the filter assembly.

CAUTION : TO PREVENT DAMAGE TO THE FILTER; DO NOT USE SOLVENTS OR GASOLINE TO CLEAN THE FILTER ASSEMBLY.

(2)Detergent and water Procedure

(a)Remove any loose dust.

1 Flush the filter assembly under a continuous flow of water not more than 2.76 bar (40 psi) and in the opposite direction to the normal air flow.

(b)Soak the filter assembly in the detergent and water solution for at least 15 minutes.

NOTE : Do not soak the filter assembly for more than 24 hours.

(c)Move the filter assembly around in the detergent and water solution to help remove the contamination.

(d)Remove all suds and contamination.

1 Flush the filter assembly under a continuous flow of water that is not more than 2.76 bar (40 psi) and in the opposite direction to the normal air flow.

(e))Dry filter assembly.

1 Dry the filter assembly in a warm airflow that is not more than 71.1 C (160 F).

(f)Hold the filter assembly towards a bright light source.

(g)Check the filter assembly for tears or holes in the filter material.

(h)Check the filter assembly for damage to the foam frame.

(j)If the filter assembly is damaged discard and replace the filter assembly.

(k)If the filter assembly is not damaged put a mark or the date on the filter assembly.

VACUUM BLOWER - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.30 m (7.50 ft.)
B.	Circuit Breaker Safety Clips and Tags
C.	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz
D.	Blanking Caps

Referenced Procedures

- 12-16-38, P. Block 1	Replenishing Toilets
- 20-28-11, P. Block 1	Electrical Bonding
- 24-41-00, P. Block 301	AC External Power Control

2. Procedure

A. Job Set-Up

(1)Drain and flush waste tank (Ref. 12-16-38, P. Block 1).

NOTE : Do not prime waste tank at this stage.

(2)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(3)Position access platform at BULK cargo compartment.

(4)Open BULK cargo compartment door (Z813).

(5)Open access door (162AZ).

B. Removal

(Ref. Fig. 401)

(1)Removal of Vacuum Blower

(a)Disconnect and cap electrical connector (9) 16MG-A or 116MG-A as required.

(b)Release clamps (1), disconnect and cap hoses (2, 3).

(c)Remove bolt (6), washer (7) and bonding strap (8).

(d)Remove bolts (4), washers (5) and vacuum blower (10).

NOTE : Vacuum blower weighs 7 kg (15.4 lb.).

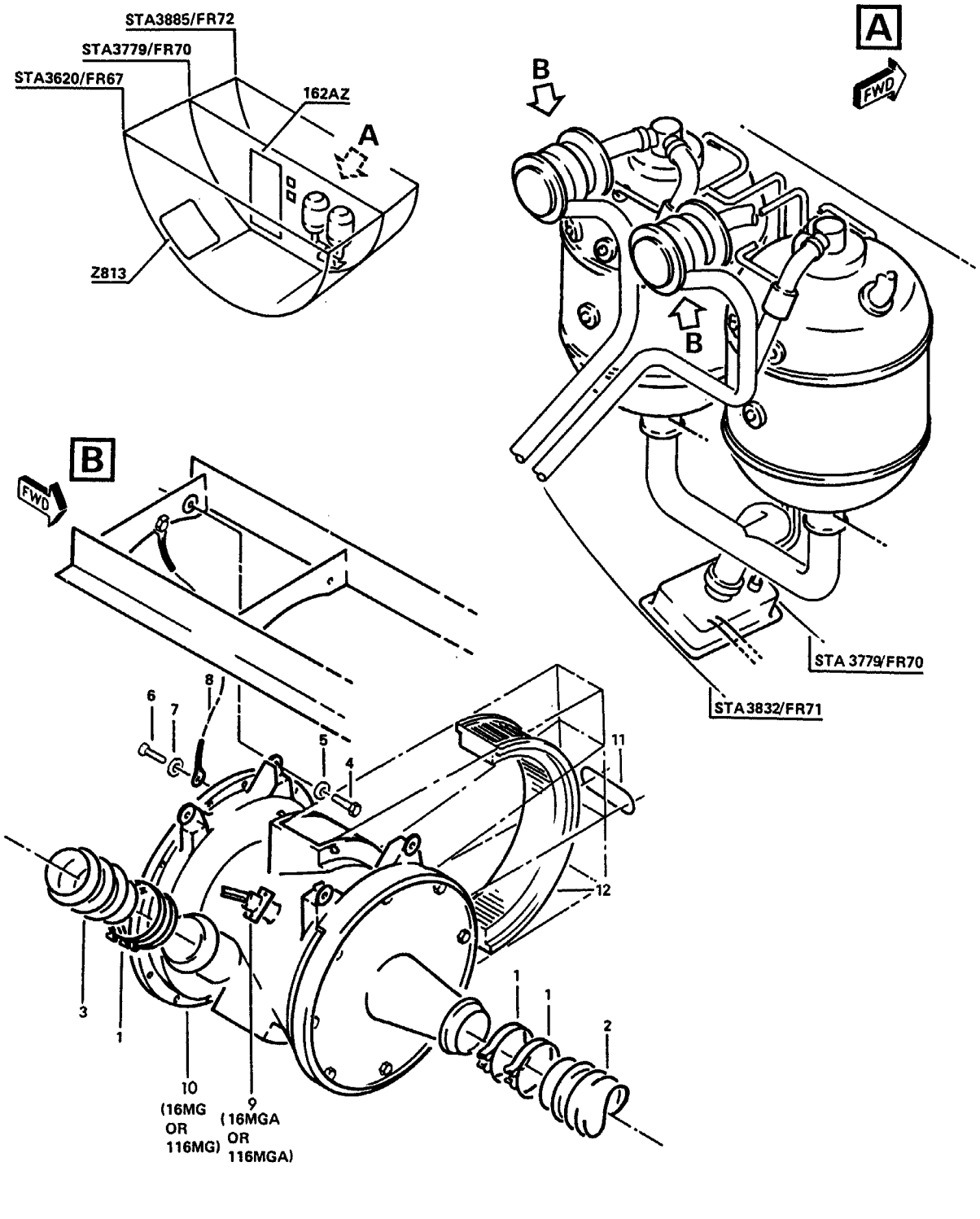
(2)Removal of Filter Assembly

(a)Remove preformed packings (11) which secure filter assembly (12) to vacuum blower (10).

NOTE : Retain packings for reinstallation.

(b)Remove and inspect filter assembly (12).

NOTE : Discard filter assembly if contaminated.



Vacuum Blower
Figure 401

C. Installation (Ref. Fig. 401)
(1)Installation of Vacuum Blower
NOTE : For electrical bonding procedure, refer to 20-28-11, P. Block 1.
(a)Position vacuum blower (10) and install washers (5) and bolts (4).
(b)Remove caps, connect hoses (2, 3) and install clamps (1).
(c)Install bonding strap (8), washer (7) and bolt (6).
(d)Connect electrical connector (9) 16MG-A or 116MG-A.
(2)Installation of Filter Assembly
(a)Install filter assembly (12).
(b)Install preformed packings (11) and secure filter assembly (12) to vacuum blower (10).

D. Test
(1)Remove safety clips and tags and close circuit breakers 11MG, 111MG, 10MG and 110MG.
(2)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(3)Make certain that electronics racks ventilation is correct.
(4)Make certain that waste service panel access door (171 AL) is closed.
(5)Press flush switch of corresponding toilet system and check that vacuum blower operates immediately.

E. Close-Up
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Close access door (162AZ).
(3)Close BULK cargo compartment door (Z813).
(4)De-energize the aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).
(5)Replenish waste tank (Ref. 12-16-38, P. Block 1).
(6)Remove access platform.

R WASTE SYSTEM DUMP VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.30 m (7.50 ft.)
B.	Blanking Caps
C.	Spring Pins
D.	Circuit Breaker Safety Clips and Tags
E.	Packings

Referenced Procedure
- 12-16-38, P. Block 1 Replenishing Toilets

2. Procedure

A. Job Set-Up
(1)Drain and flush waste tanks (1) (Ref. 12-16-38, P. Block 1).
NOTE : Do not prime waste tank at this stage.

(2)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

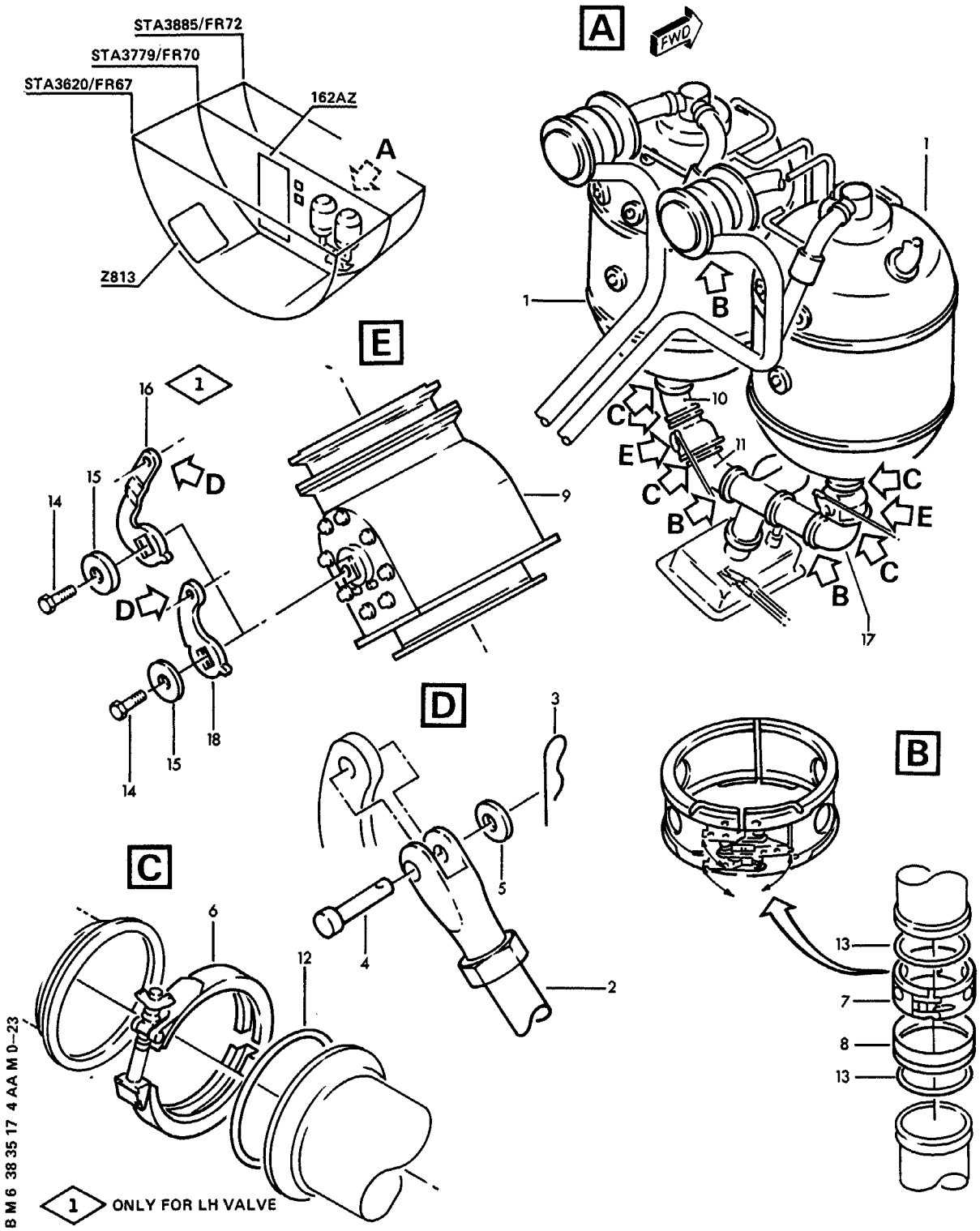
(3)Position access platform at BULK cargo compartment.
(4)Open BULK cargo compartment door (Z813).
(5)Open access door (162AZ).

B. Removal
(Ref. Fig. 401)

R (1)Remove L/H waste system dump valve (9) as follows:
(a)Disconnect control rod (2) by removing spring pin (3) and pin (4) with washer (5).
(b)Remove clamp (6) at waste tank (1).
(c)Open clamshell (7) and remove sleeve (8)from tube (11).
R (d)Remove waste system dump valve (9) with connecting tubes (10, 11).
R (e)Remove clamps (6) and connection tubes (10, 11) from waste system
R dump valve (9).
R (f)Remove and discard packings (12, 13) from waste system dump valve (9)
R and from connection tubes (10, 11).
R NOTE : When L/H waste system dump valve is to be replaced, remove
R bolt (14), washer (15) and lever (16). Retain lever (16) for
R installation on replacement dump valve.
(g)Fit blanking caps to openings in waste tank (1) and connection tube (17).
R (2)Remove R/H waste system dump valve (9) as follows:
(a)Disconnect control rod (2) by removing spring pin (3) and pin (4) with washer (5).
(b)Remove clamp (6) at waste tank (1).
(c)Open clamshell (7) and remove sleeve (8) from tube (17).
R (d)Remove waste system dump valve (9) with connection tube (17).
R (e)Remove clamp (6) and connection tube (17) from waste system dump
R valve (9).
R (f)Remove and discard packings (12, 13) from waste system dump valve (9)
R and from connection tube (17).
(g)Fit blanking caps to openings in waste tank (1) and connection tube (17).

C. Preparation for Installation
(1)Make certain that waste drain valves (9) operate freely.
R (2)Check that the correct lever (16) is fitted to the L/H waste system dump
R valve. If necessary, remove lever (18) from waste drain valve and
R replace retained lever (16) to replacement waste system dump valve.
(3)Make sure that lever (16) is in the correct position.
(4)Remove blanking caps from waste tanks (1) and connection tubes (10, 11, 17).
R (5)Fit new packings (12, 13) to the waste system dump valves (9) and the
R connection tubes (10, 11, 17).

D. Installation (Ref. Fig. 401)
R (1)Install L/H waste system dump valve (9) as follows:
R NOTE : Make certain that waste system dump valve arrow is in direction
R of flow.
R (a)Position connection tubes (10, 11) on waste system dump valve (9) and
R fit clamps (6). Do not tighten at this stage.
(b)Position assembly between waste tank (1) and the waste drain line.
(c)Fit clamp (6) at waste tank (1). Do not tighten at this stage.
(d)Fit sleeve (8) and clamshell (7) to tube (11).
(e)Tighten all clamps (6) and clamshell (7).



Waste System Dump Valve
Figure 401

R

(f)Connect control rod (2) with pin (4), washer (5) and spring pin (3).

R (2)Install R/H waste system dump valve (3) as follows:

R NOTE : Make certain that waste system dump valve arrow is in direction
R of flow.

R (a)Position connection tube (17) on waste system dump valve (9) and fit clamp (6). Do not tighten at this stage.

(b)Position assembly between waste tank (1) and the waste drain line.

(c)Fit clamp (6) at waste tank (1). Do not tighten at this stage.

(d)Fit sleeve (8) and clamshell (7) to tube (17).

(e)Tighten all clamps (6) and clamshell (7).

(f)Connect control rod (2) with pin (4), washer (5) and spring pin (3).

E. Test

(1)Check waste drain lines by flushing and priming waste tanks (1) (Ref. 12-16-38, P. Block 1).

(2)Inspect waste drain line connections for leakage.

NOTE : Leakage is not permissible.

R (3)Check operation of waste system dump valves (9) with dump valve control handles on service panel.

F. Close-Up

(1)Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.

(2)Close access door (162AZ).

(3)Close BULK cargo compartment door (Z813).

(4)Remove access platform.

(5)Remove all clips and tags and close circuit breakers 10MG, 11MG, 110MG and 111MG.

(6)Replenish waste tanks (1) (Ref. 12-16-38, P. Block 1), if necessary.

CONTROL CABLE - WASTE SYSTEM DUMP VALVE& REMOVAL/INSTALLATION

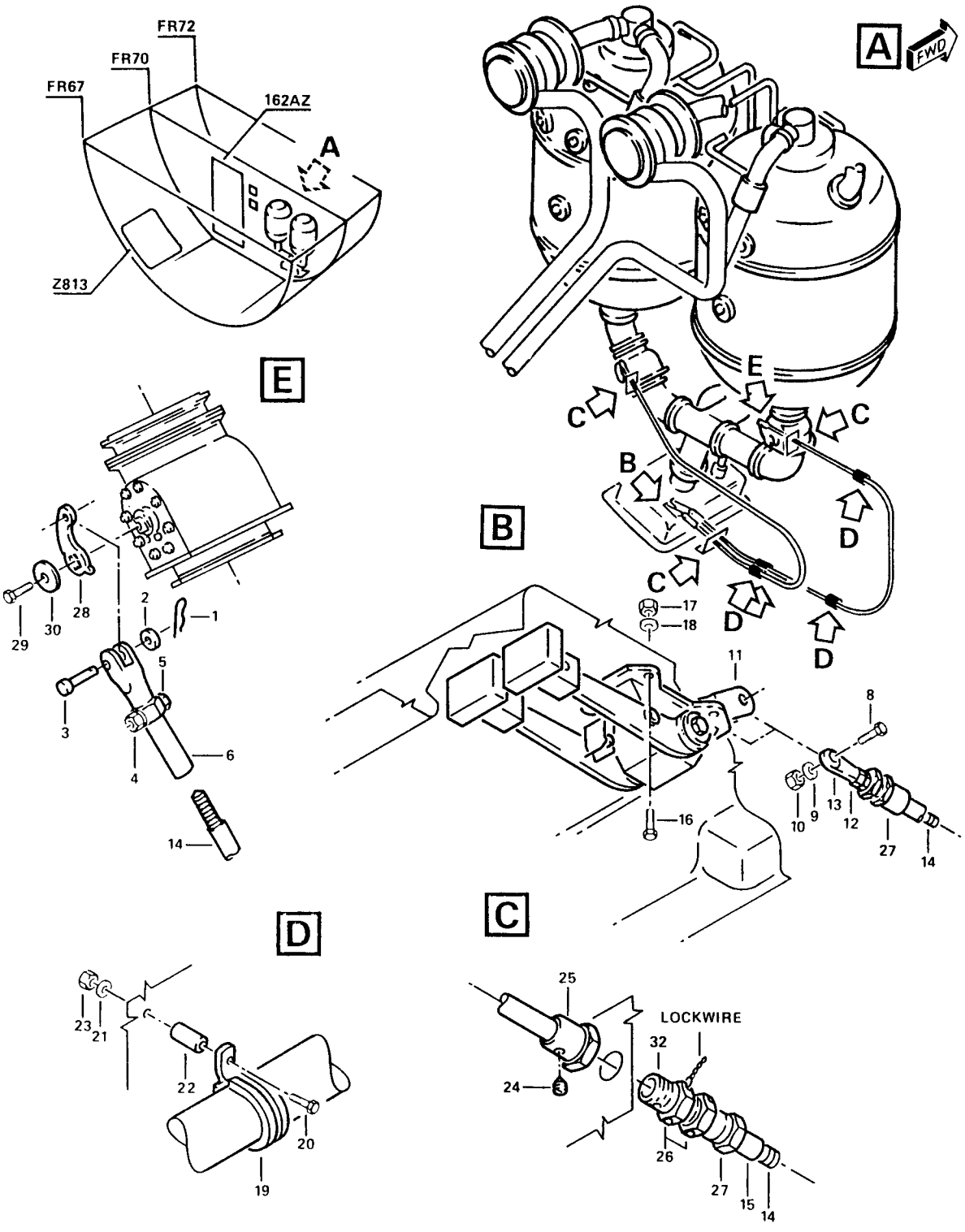
1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform 2.7 m (9 ft.)
B.	Torque Wrench, up to 1.0 m.daN (88.5 lbf.in.)
C.	Corrosion-Resistant Steel Lockwire, 0.8 mm (0.032 in.) dia.
D.	Cotter pins
E. Material No. 04-004	Common Greases (Ref. 20-31-00)
F. Material No. 05-020	Special Materials (Ref. 20-31-00)
G. Material No. 09-002	Sealants (Ref. 20-31-00)
H. Material No. 09-007	Sealants (Ref. 20-31-00)
Referenced Procedures	
- 12-16-38, P. Block 1	Replenishing Toilets
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors

2. Procedure

A. Job Set-Up
(1)Drain and clean appropriate toilet system (Ref. 12-16-38, P. Block 1).
(2)Position access platform at BULK cargo compartment door (Z813).
(3)c)Open BULK cargo compartment door (Z813).
(4)Open partition door (162AZ).

B. Removal (Ref. Fig. 401)
(1)At dump valve:
(a)Remove and discard cotter pin (1).
(b)Remove washer (2) and pin (3) from valve lever (28).
(c)Loosen nut (4) and bolt (5).
(d)Unscrew clevis (6) from cable (14).
NOTE : Rotate clevis clockwise, left-hand thread.
(e)Remove lever (28) by removal of bolt (29) and washer (30).
(2)At waste service panel:
(a)Remove nut (10), bolt (8) and washer (9) from dump lever assembly (11).
(b)Release lock nuts (12) and unscrew end fitting (13) to reveal cable (14).
(c)Pull cable (14) out of tube (15).
(3)Removal of dump lever assembly (11)
(a)Remove nuts (17), bolts (16) and washers (18).
(b)Remove dump lever assembly (11).
(4)Removal of tube (15)
(a)Remove all nuts (23), washers (21), spacers (22) and bolts (20).
(b)Remove all clamps (19).
(c)Release locknuts (27) and remove tube (15).
(d)Remove lockwire and release locknuts (26).
(e)Remove set screw (24), sleeve (25) and swivel end (32).



Waste System Dump Valve Control Cable
Figure 401

C. Preparation for Installation
(1)Make sure that cable is not kinked or broken.
(2)Apply grease (Mat. No. 04-004) to all end fittings and threads.

D. Installation (Ref. Fig. 401)
(1)Installation of tube (15)
(a)Install swivel end (32), sleeve (25) and set screw (24).
(b)Tighten locknuts (26) and secure with lock wire 0.8 mm (0.032 in.) dia.
(c)Install tube (15), tighten nuts (27) secure with lock wire 0.8 mm (0.032 in.) dia.
(d)Put clamps (19) in position.
(e)Install all bolts (20), spacers (22), washers (21) and nuts (23).
(2)Installation of dump lever assembly (11)
(a)Remove old sealant from waste service panel and dump lever assembly (11).
(b)Apply release agent (Mat. No. 05-020) to dump lever assembly base and waste service panel.
(c)Put dump lever assembly (11) in position.
(d)Install bolts (16), washers (17) and nuts (18).
(e)Apply a fillet coating of sealant (Mat. No. 09-007) around base of dump lever assembly (11).
(f)Overcoat with sealant (Mat. No. 09-002) when fillet sealant has cured.
(3)At dump valve:
(a)Put lever (28) in position.
(b)Install washer (30) and bolt (29).
(c)Insert cable (14) in tube (15).
(d)Rotate clevis (6) counterclockwise (left hand thread) onto cable (14) until pin hole of clevis (6) is in line with pin hole of lever (28).
(e)Temporarily connect clevis (6) to lever (28) with pin (3).
(4)At waste service panel:
NOTE : Make sure that dump valve lever and handle are in closed position.
(a)Screw end fitting (13) on exposed thread of cable (14) and tighten lock nuts (12).
(b)Connect end fitting (13) to dump lever assembly (11) using bolt (8), washer (9) and nut (10).
(5)Adjustment/Test
(a)Operate dump levers and make sure that dump valve open and close fully.
NOTE : If adjustment is required, turn clevis (6) in clockwise or counterclockwise direction.
(b)Connect clevis (6) to valve lever (28) using pin (3), washer (2) and new cotter pin (1).
(b)TORQUE nut (4) to 0.56 m.daN (50 lbf.in.).

E. Close-Up
(1)Make certain that working area is clean, and clear of tools miscellaneous items of equipment.
(2)Close partition door (162AZ).
(3)Close BULK cargo compartment door (Z813)
(4)Remove access platforms.
(5)Replenish appropriate toilet system (Ref. 12-16-38, P. Block 1).

CHECK VALVE - VENT LINE - REMOVAL/INSTALLATION

WARNING : CLEANING AGENT (MAT. NO. 11-003) IS DANGEROUS.
NOTE : Removal/Installation procedure is identical for LH and RH Check Valve - Vent Line.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.3 m (7.5 ft.)
B.	Blanking Caps
C.	Blanking Plate
D.	Cotter Pins
E.	Circuit Breaker Safety Clips and Tags
F. Material No. 09-019	Sealants (Ref. 20-31-00)
G. Material No. 11-003	Cleaning Agents (Ref. 20-31-00)

Referenced Procedure

- 12-16-38, P. Block 1	Replenishing Toilets
- 20-28-11, P. Block 1	Electrical Bonding
- 51-76-10, P. Block 801	Repair of Sealing

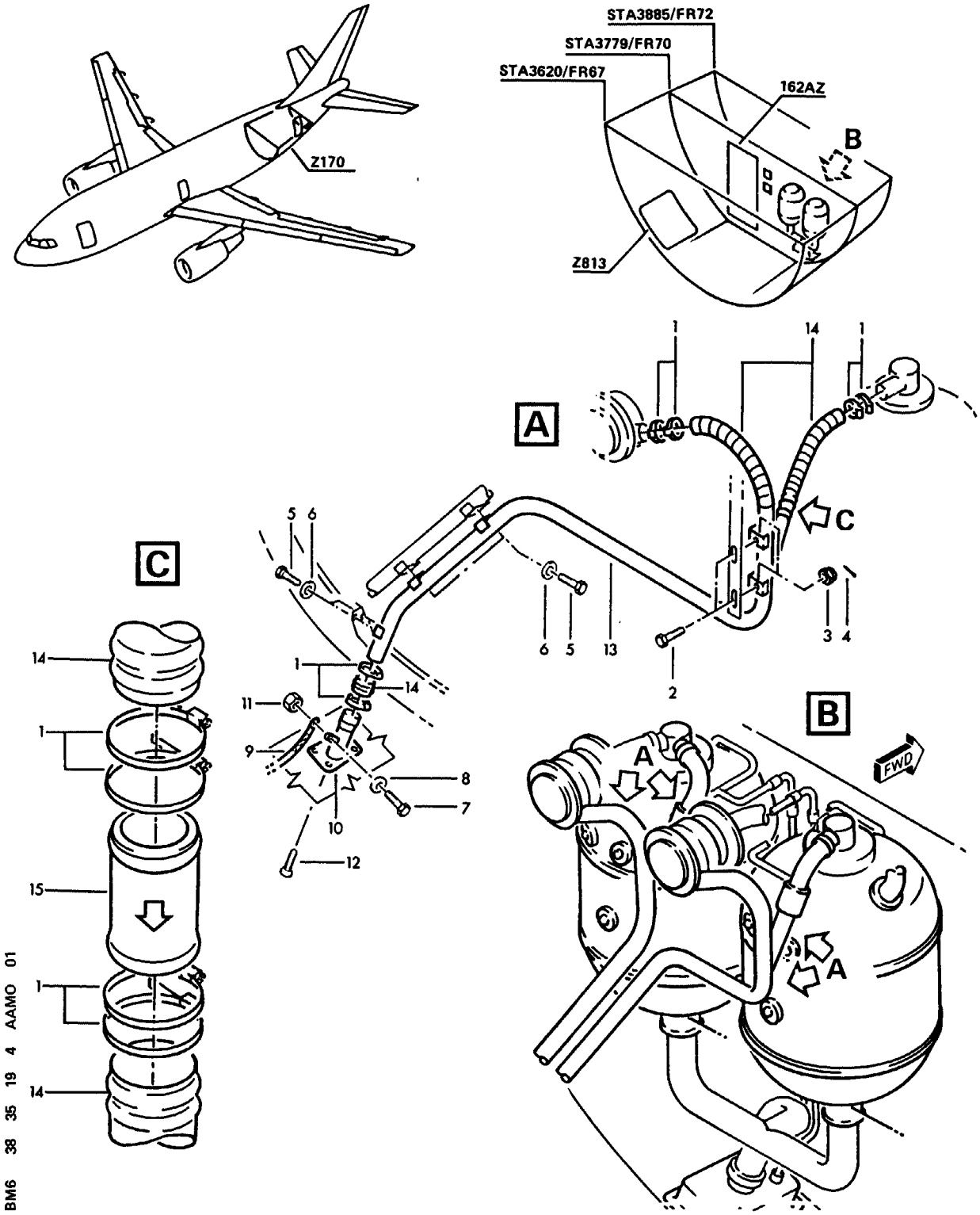
2. Procedure

A. Job Set-Up
(1)Drain and flush waste tanks (Ref. 12-16-38, P. Block 1).
NOTE : Do not prime waste tanks at this stage.
(2)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL LH	111MG	J10
800VU	FLUSH CTL RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(3)Position access platform and open BULK cargo compartment door (Z813).
(4)Open access door (162AZ) to gain access to check valves - vent lines.

B. Removal
(Ref. Fig. 401)
(1)Check Valve
(a)Release clamps (1) and disconnect hoses (14).
(b)Remove check valve (15).
(c)Install blanking caps to disconnected hoses and check valve.
(2)Vent Line
(a)Remove nut (11), washer (8), screw (7) and bonding strap (9).
(b)Remove bolts (5) and washers (6).
(c)Release clamps (1) and disconnect flexible pipes (14).
(d)Remove cotter pins (4), nuts (3), bolts (2) and vent line (13).



Check Valve - Vent Line
Figure 401

(e)Discard cotter pins.
(f)Remove sealant from plate (10).
(g)Position access platform under vent line outlet.
(h)Remove screws (12) and plate (10).
WARNING : CLEANING AGENT (MAT. NO. 11-003) IS DANGEROUS.
(j)Remove sealant remnants from plate (10) and aircraft fuselage with cleaning agent (Mat. No. 11-003).
(k)Install blanking caps to disconnected hoses and blanking plate to aircraft fuselage.

C. Installation (Ref. Fig. 401)
NOTE : For electrical bonding procedure, refer to (20-28-11, P. Block 1).
(1)Vent line
(a)Remove blanking caps from disconnected hoses and blanking plate from aircraft fuselage.
(b)Install plate (10) and screws (12).
(c)Seal plate (10) with sealant (Mat. No. 09-019) (Ref. 51-76-10, P. Block 801).
(d)Position vent line (13) and install bolts (2), nuts (3) and new cotter pins (4).
(e)Connect flexible pipes (14) and secure with clamps (1).
(f)Install washers (6) and bolts (5).
(g)Install bonding strap (9), screw (7), washer (8) and nut (11).
(2)Check Valve
(a)Remove blanking caps from disconnected hoses (14) and check valve (15).
(b)Install check valve (15) to hoses (14) and secure with clamps (1).
NOTE : Make certain that check valve is installed with arrow towards overboard vent.

D. Close-Up
(1)Remove safety clips and tags and close circuit breakers 10MG, 11MG, 110MG and 111MG.
(2)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(3)Close access door (162AZ) and BULK cargo compartment door (Z813).
(4)Remove access platform.
(5)Prime waste tanks (Ref. 12-16-38, P. Block 1), if necessary.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.30 m (7.50 ft.)
B.	Blanking Caps
C.	Circuit Breaker Safety Clips and Tags

Referenced Procedure

- 12-16-38, P. Block 1	Replenishing Toilets

2. Procedure

A. Job Set-Up

(1)Drain and flush waste tanks (1) (Ref. 12-16-38, P. Block 1).

NOTE : Do not prime waste tank at this stage.

(2)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

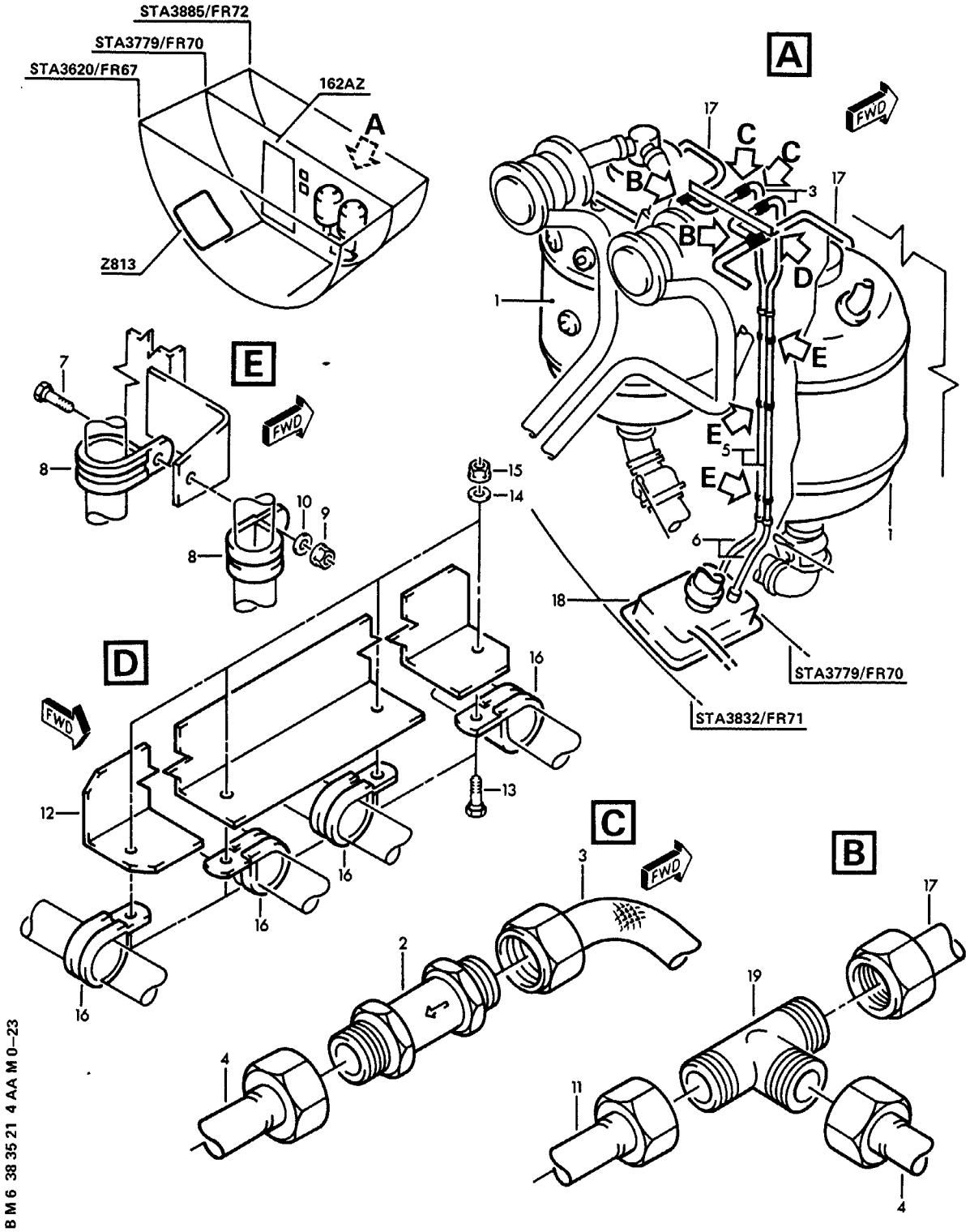
(3)Position access platform at BULK cargo compartment door (Z813).

(4)Open BULK cargo compartment door (Z813).

(5)Open access door (162AZ).

B. Removal
(Ref. Fig. 401)
(1)Check Valves (2)
(a)Disconnect unions of hoses (3).
(b)Remove check valves (2) from tubes (4).
(c)Install blanking caps on open ends of hoses (3) and tubes (4).
(2)Flush Lines
(a)Disconnect unions of hoses (6) at toilet service panel (18).
(b)Remove nuts (9), washers (10) and screws (7).
(c)Remove tubes (5) with hoses (3, 6).
(d)Remove clamps (8) from tubes (5) and hoses (6).
(e)Disconnect hoses (3, 6) from tubes (5).
(f)Install blanking caps on tubes (5) and hoses (3, 6).
(g)Remove nuts (15), washers (14) and screws (13).
(h)Remove angle (12) and clamps (16).
(j)Remove tubes (4) by disconnecting unions at T-fittings (19).
(k)Remove tubes (11, 17) by disconnecting unions at waste tanks (1).
(l)Disconnect tubes (11, 17) from T-fittings (19).
(m)Install blanking caps to tubes (4, 11, 17), T-fittings (19) and waste tanks (1).

C. Installation (Ref. Fig. 401)
(1)Flush Lines
(a)Remove blanking caps from tubes (4, 11, 17), T-fittings (19) and waste tanks (1).
(b)Connect tubes (11, 17) to T-fittings (19).
(c)Position tubes (11, 17) on waste tanks (1) and connect unions.
(d)Connect unions of tubes (4) to T-fittings (19).
(e)Position clamps (16) and angle (12) on tubes (4, 17).
(f)Install screws (13), nuts (15) and washers (14).
(g)Remove blanking caps from hoses (3, 6) and tubes (5).
(h)Install clamps (8) to tubes (5) and hoses (6).
(j)Connect hoses (3, 6) to tubes (5).
(k)Position tubes (5) and hoses (3, 6) on bulkhead.
(l)Connect unions of hoses (6) at toilet service panel (18).
(m)Install screws (7), nuts (9) and washers (10).
(2)Check Valves (2)
(a)Remove blanking caps from hoses (3) and tubes (4).
(b)Install check valves (2) in tubes (4).
NOTE : Make certain that check valve arrow is in direction of flow.
(c)Connect unions of hoses (3) to check valves (2).



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Flush Line - Check Valve
Figure 401

D. Test
(1)Check flush line by flushing and priming waste tanks (1) (Ref. 12-16-38, P. Block 1).
(2)Inspect flush line connections for leakage.
NOTE : Leakage is not permissible.

E. Close-Up
(1)Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.
(2)Close access door (162AZ).
(3)Close BULK cargo compartment door (Z813).
(4)Remove access platform.
(5)Remove safety clips and tags and close circuit breakers 10MG, 110MG, 11MG, 111MG.
(6)Replenish waste tanks (1) (Ref. 12-16-38, P. Block 1), if necessary.

SHUTOFF VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps
B.	Circuit Breaker Safety Clips and Tags
C.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
D.	Corrosion-Resistant Steel Lockwire, 0.6 mm (0.024 in.) dia
E.	O-Rings
F.	Packing

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 24-41-00, P. Block 301	AC External Power Control
- 25-45-11, P. Block 401	Toilet Shroud
- 38-40-00, P. Block 301	Air Supply

2. Procedure

A. Job Set-Up
(1)Open, safety and tag the following circuit breakers:

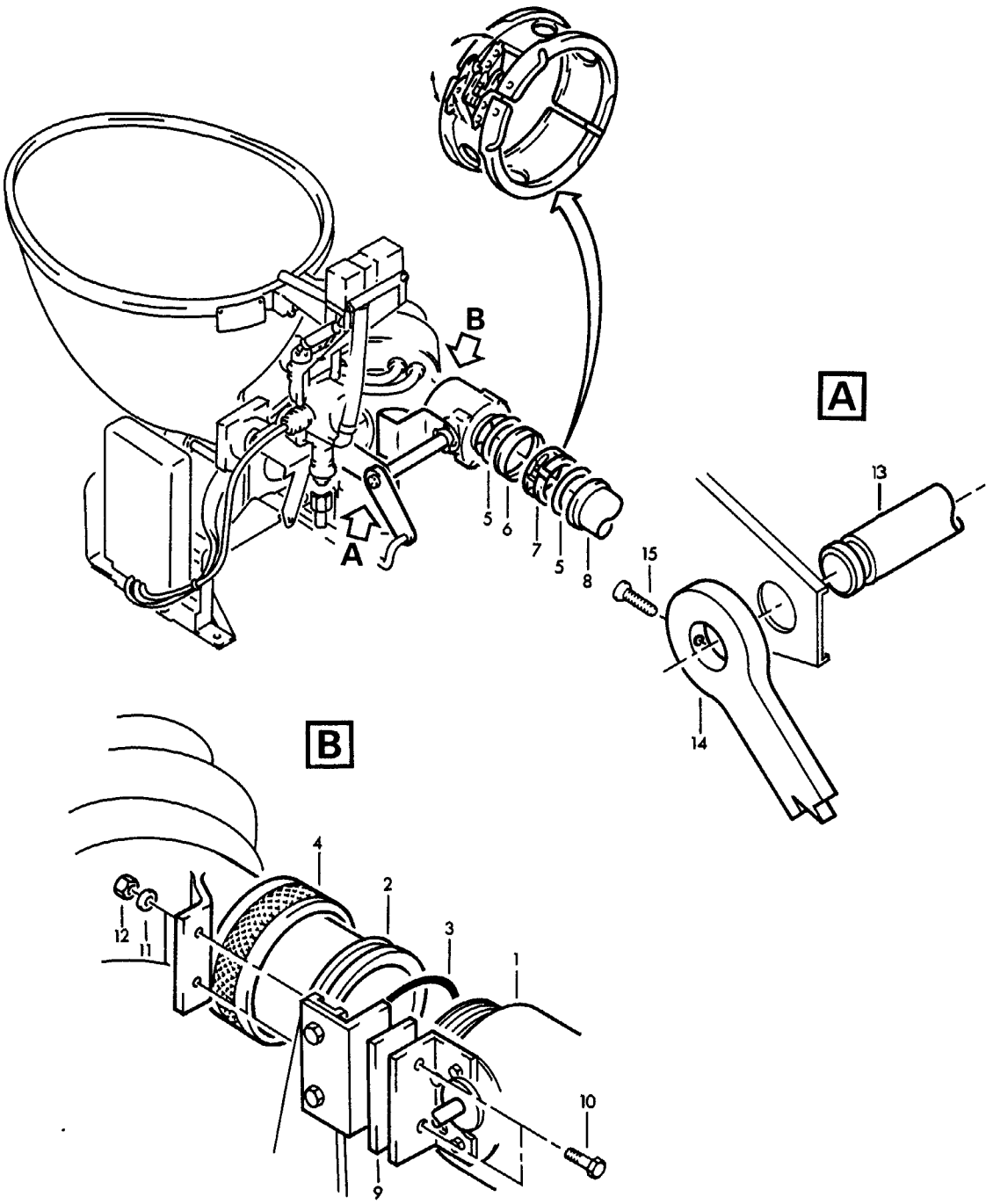
PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(2)Close manual shutoff valve in sanitary unit cabinet.
(3)Remove toilet shroud (Ref. 25-45-11, P. Block 401).

B. Removal
(Ref. Fig. 401)
(1)Remove shutoff valve (1) as follows:
NOTE : The removal of all shutoff valves in all toilet assemblies is similar; therefore, only the removal of one shutoff valve is described and applies to LH and RH toilet assemblies.
(a)Remove clamshell (7) and slide sleeve (6) over tube (8).
NOTE : Quick-disconnect action of the clamshell (7) enables assembly/removal by one hand. All three latch pawls must be lifted simultaneously to disengage the latch.
(b)Loosen set screw (15) and slide arm (14) from shaft (13).
(c)Remove lockwire and loosen nut (4).
(d)Remove nuts (12), washers (11) and screws (10).
(e)Remove shutoff valve (1) from flush valve (2).
(f)Remove shim (9) and retain for reinstallation.
(g)Remove sleeve (6) from tube (8).
(h)Remove and discard O-rings (5).
(j)Remove and discard packing (3).
(k)Install blanking caps to tube (8) flush valve (2) and shutoff valve (1).

R C. Preparation for Installation (Ref. Fig. 401)
(1)Make certain that shutoff valve (1) is clean and no external damage is visible.
(2)Remove blanking caps from tube (8), flush valve (2) and shutoff valve (1).

D. Installation (Ref. Fig. 401)
(1)Install new packing (3) to shutoff valve (1).
(2)Slide sleeve (6) over tube (8) and install new O-rings (5) to tube (8) and shutoff valve (1).
(3)Position shutoff valve (1) on flush valve (2).
(4)Slide sleeve (6) over O-rings (5) and install clamshell (7).
(5)Hand tighten nut (4).
(6)Install shim (9) and screws (10) with washers (11) and nuts (12).
(7)Tighten nut (4) and safety with lockwire.
(8)Slide arm (14) over shaft (13).
(9)Tighten setscrew (15).



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Shutoff Valve
Figure 401

E. Test

(1)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).

R (2)Make certain that electronics racks ventilation is correct.

R (3)Replenish potable water system (Ref. 12-15-38, P. Block 1) if necessary and pressurize water system (Ref. 38-40-00, P. Block 301).

R (4)Remove safety clips and tags and close circuit breakers 10MG, 110MG, 11MG and 111MG.

R (5)Open manual shutoff valve in sanitary unit cabinet.

R (6)Flush toilet assy a few times and check for normal operation.

R (7)Inspect shutoff valve connections for leakage.

NOTE : Leakage is not permissible.

F. Close-Up

(1)Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.

(2)Install toilet shroud (Ref. 25-45-11, P. Block 401).

(3)De-energize aircraft electrical network (Ref. 24-41-00, P. Block 301) and disconnect ground power unit.

ANTISYPHON VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps
B.	Circuit Breaker Safety Clips and Tags
C.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
D.	Packing
E.	Torque Wrench, up to 0.5 m.daN (44 lbf.in.)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 24-41-00, P. Block 301	AC External Power Control
- 25-45-11, P. Block 401	Toilet Shroud
- 38-40-00, P. Block 301	Air Supply

2. Procedure

A. Job Set-Up

(1)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

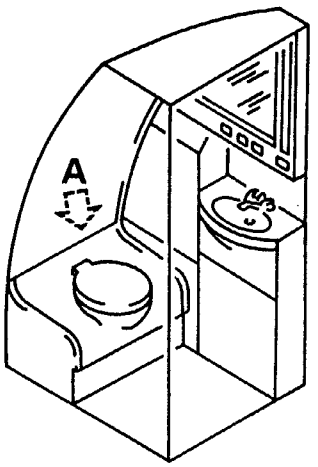
(2)Close manual shutoff valve in sanitary unit cabinet.

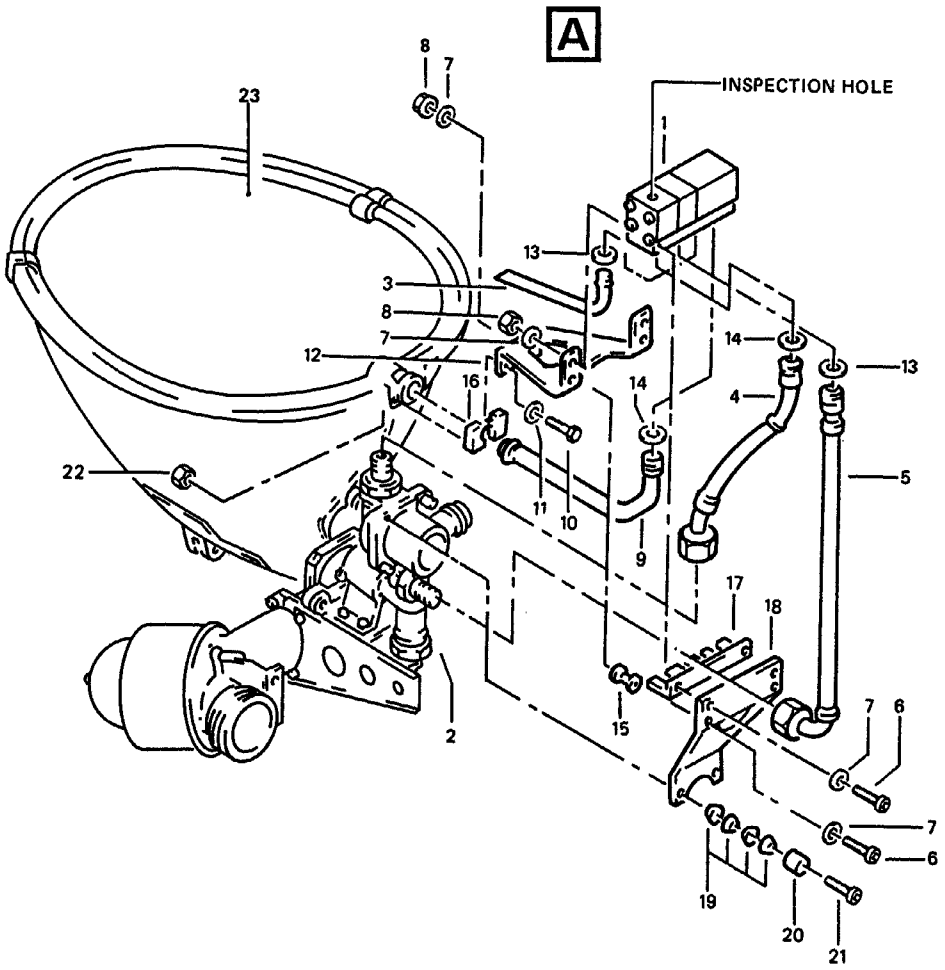
(3)Remove toilet shroud (Ref. 25-45-11, P. Block 401).

B. Removal
(Ref. Fig. 401)
(1)Remove antisyphon valve (1) as follows:
NOTE : The removal of antisyphon valve in all toilet assemblies is similar, therefore, only the removal of one antisyphon valve is described and applies to LH and RH toilet assemblies.
(a)Remove upper nuts (8), washers (7) and screws (6).
(b)Pull antisyphon valve (1) upwards to free it from tube (9) and hoses (4, 5).
(c)Remove retainer (17).
(d)Remove tube (3) from antisyphon valve (1).
(2)If necessary, remove attachment assemblies as follows:
(a)Remove lower nuts (8), washers (7), screws (6) and spacers (15).
(b)Remove bracket (18) from water valve (2) by removing screws (21), spacers (20) and Belleville washers (19).
(c)Disconnect unions of hoses (4, 5) at water valve (2).
(d)Remove bracket (12) and retainer (16) from toilet bowl (23) by removing bolts (10), washers (11) and nuts (22).
(e)Pull tube (9) from toilet bowl (23).
(f)Remove and discard packings (13, 14) from tubes (3, 9) and hoses (4, 5).
(3)Install blanking caps to all openings in antisyphon valve (1), water valve (2), toilet bowl (23), tubes (3, 9) and hoses (4, 5).

C. Preparation for Installation (Ref. Fig. 401)
(1)Make certain that antisyphon valve (1) and all other parts are clean and no external damage is visible.
(2)Make certain that installation area is clean and clear of tools and miscellaneous items of equipment.

D. Installation (Ref. Fig. 401)
(1)Remove all blanking caps from antisyphon valve (1), water valve (2), toilet bowl (23), tubes (3, 9) and hoses (4, 5).
(2)Install new packings (13, 14) to tubes (3, 9) and hoses (4, 5).
(3)If removed, install attachment assemblies as follows:
(a)Insert tube (9) in toilet bowl (23).
(b)Install bracket (12) and retainer (16) to toilet bowl (23) by installing bolts (10), washers (11) and nuts (22).
(c)TORQUE bolts (10) to 0.395 m.daN (35 lbf.in.).
(d)Connect unions of hoses (4, 5) to water valve (2).
(e)Install bracket (18) to water valve (2) by installing screws (21), spacers (20) and Belleville washers (19).
(f)Install lower screws (6), washers (7), spacers (15) and nuts (8).
(4)Install antisyphon valve (1) as follows:
(a)Position retainer (17).
(b)Insert tube (3) in antisyphon valve (1).
(c)Push antisyphon valve (1) down to connect tube (9) and hoses (4, 5).
(d)Install upper nuts (8), washers (7), screws (6).





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Antisyphon Valve
Figure 401

E. Test
(1)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(2)Make certain that electronics racks ventilation is correct.
(3)Replenish portable water system (Ref. 12-15-38, P. Block 1).
(4)Pressurize water system (Ref. 38-40-00, P. Block 301).
(5)Remove safety clips and tags and close circuit breakers 10MG, 110MG, 11MG and 111MG.
(6)Check through inspection hole in antisyphon valve that spring is extended.
(7)Open manual shutoff valve in sanitary unit cabinet.
(8)Check through inspection hole in antisyphon valve that spring is compressed.
(9)Flush toilet assy a few times and check for normal operation.
(10)Inspect all previously disconnected connections for leakage.
NOTE : Leakage is not permissible.

F. Close-Up
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Install toilet shroud (Ref. 25-45-11, P. Block 401).
(3)De-energize aircraft electrical network (Ref. 24-41-00, P. Block 301) and disconnect ground power unit.
NOTE : Leakage is not permissible.

ANTISIPHON VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps
B.	Circuit Breaker Safety Clips and Tags
C.	Electrical Ground Power Unit, 3-Phase 115/200 V, 100 Hz
D.	Container - Capacity 2 l (0.53 US gal.)
E.	Torque wrench, up to 5.9 m.daN (45.51 lbf.ft)
F.	Lint-free cloth
G.	O-Rings
H.	Packings
J. Material No. 04-008	Common Grease (Ref. 20-31-00)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 24-41-00, P. Block 301	AC External Power Control
- 25-45-11, P. Block 401	Toilet Shroud
- 38-40-00, P. Block 301	Air Supply

2. Procedure

A. Job Set-Up for lavatory A, T, W, Y and Z

(1)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(2)Open sanitary unit cabinet door in the appropriate lavatory.

(3)Close water shutoff valve.

(4)Remove toilet shroud (Ref. 25-45-11, P. Block 401).

(5)Place container under antisiphon valve.

B. Job Set-Up for lavatory X

(1)Open, safety and tag the following circuit breakers:

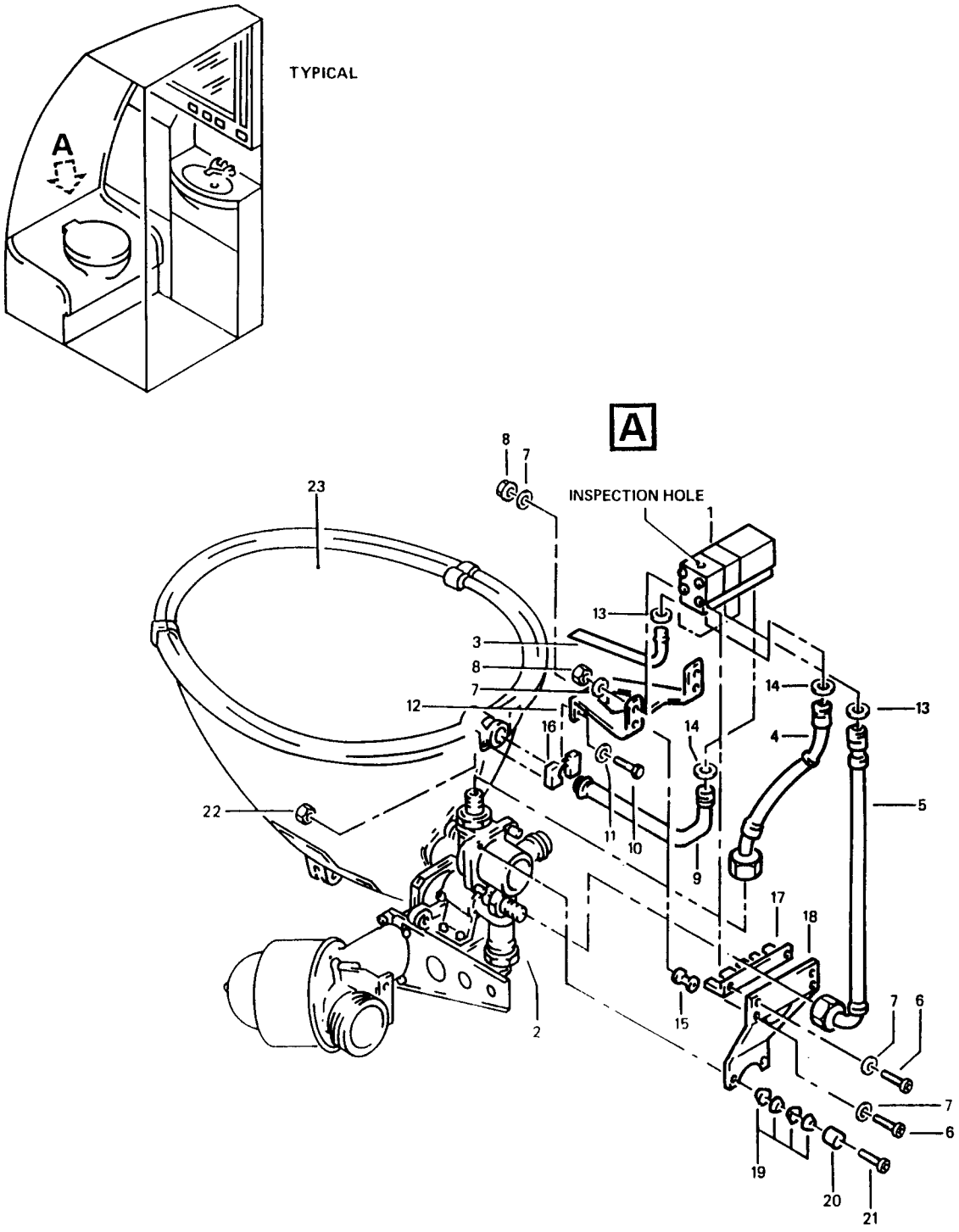
PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(2)Open access panel of water shutoff valve.

(3)Close water shutoff valve.
(4)Remove toilet shroud (Ref. 25-45-11, P. Block 401).
(5)Place container under water shutoff/antisiphon valve.

C. Removal
(1)Removal of antisiphon valve from lavatory A, T, W, Y and Z
(Ref. Fig. 401)
NOTE : The removal of all the antisiphon valves is similar, therefore only the removal of one antisiphon valve is described.
(a)Remove antisiphon valve (1).
1 Remove nuts (8), washers (7) and screws (6).
2 Pull antisiphon valve (1) upwards to disconnect it from tube (3, 9) and hoses (4, 5).
3 Remove retainer (17).
4 Remove tube (3).
5 Remove and discard packings (13, 14).
(b)Remove attachment assemblies, only if necessary.
1 Remove nuts (8), washers (7), screws (6) and spacers (15).
2 Remove screws (21), spacers (20) and belleville washers (19).
3 Remove bracket (18) from water valve (2).
4 Disconnect and remove hoses (4, 5) from water valve (2).
5 Remove nuts (22), bolts (10) and washers (11).
6 Remove bracket (12) and retainer (16).
7 Remove tube (9) from toilet bowl (23).
(c)Install blanking caps to all openings in antisiphon valve (1), water valve (2), toilet bowl (23), tubes (3, 9) and hoses (4, 5).
(2)Removal of water shutoff/antisiphon valve from lavatory X
(Ref. Fig. 402)
(a)Disconnect electrical connector (3).
(b)Put blanking caps on disconnected electrical connectors.
(c)Slowly loosen nut (5) to disconnect hose (4).
NOTE : Approximately 1.5 l (0.3962 US gal.)of water will drain
R from hose (4).
(d)Remove screws (8) and water valve retainer (7).
(e)Disconnect spray ring tube (9) from water shutoff/antisiphon valve (11).
(f)Remove and discard O-rings (10).
(g)Remove screws (6).
(h)Remove screws (2), washers (1) and water shutoff/antisiphon valve (11).
(j)Install blanking caps on all openings.

D. Preparation for Installation
(1)Make certain that valve is clean and no external damage is visible.
(2)Remove all blanking caps from all openings and electrical connectors.
(3)Apply grease (Mat. No. 04-008) to all new O-rings and packings.



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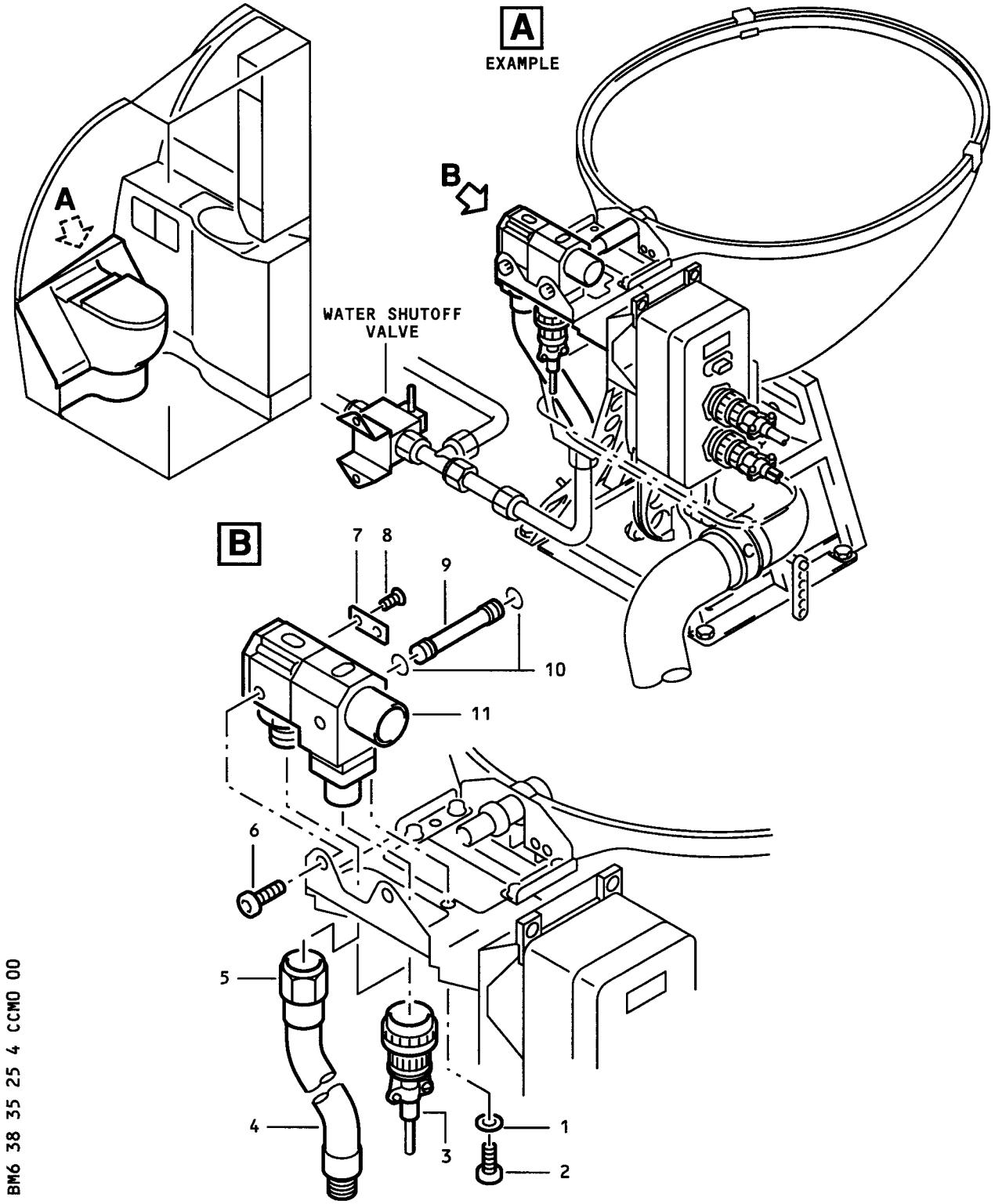
Antisiphon Valve
Figure 401



Water Shutoff/Antisiphon Valve
Figure 402

E. Installation

(1)Installation of antisiphon valve for lavatory A, T, W, Y and Z (Ref. Fig. 401)

NOTE : The installation of all the antisiphon valves is similar, therefore only the installation of one antisiphon valve is described.

(a)Install attachment assemblies, only if removed.

1 Insert tube (9) in toilet bowl (23).
2 Put retainer (16) and bracket (12) in position.
3 Install bolts (10), washers (11) and nuts (22).
4 TORQUE bolts (10) to 0.395 m.daN (35 lbf.in.).
5 Connect hoses (4, 5) to water valve (2).
6 Put bracket (18) in position on water valve (2).
7 Install belleville washers (19), spacers (20) and screws (21).
8 Install spacers (15), washers (17), screws (6) and nuts (8).

(b)Install antisiphon valve (1).

1 Install new packings (13, 14).
2 Install tube (3).
3 Install retainer (17).
4 Push antisiphon valve (1) down to connect it to tube (3, 9) and hoses (4, 5).
5 Install screws (6), washers (7) and nuts (8).

(2)Installation of water shutoff/antisiphon valve for lavatory X (Ref. Fig. 402)

(a)Put water shutoff/antisiphon valve (11) in position.
(b)Install washers (1) and screws (2.
(c)Install screws (6).
(d)Install new O-rings (10) to spray ring tube (9).
(e)Connect spray ring tube (9) to water shutoff/antisiphon valve (11).
(f)Install water valve retainer (7) and screws (8).
(g)Connect hose (4).
(h)TORQUE nut (5) to 5.9 m.daN (43.51 lbf.ft.).
(j)Connect electrical connector (3).

F. Test for Lavatory A, T, W, Y and Z

(1)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(2)Replenish potable water system (Ref. 12-15-38, P. Block 1), if necessary.
(3)Pressurize water system (Ref. 38-40-00, P. Block 301).
(4)Remove safety clips and tags and close circuit breaker 10MG, 11OMG, 11MG and 111MG.
(5)Check through the inspection hole in antisiphon valve that spring is extended.
(6)Open water shutoff valve.
(7)Check through the inspection hole in antisiphon valve that spring is compressed.
(8)Flush toilet assy a few times and check for normal operation.

(9)Inspect all potable water connections for leaks.
NOTE : Leaks are not permitted.
(10)Depressurize water system (Ref. 38-40-00, P. Block 301).

G. Test for Lavatory X
(1)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(2)Replenish potable water system (Ref. 12-15-38, P. Block 1), if necessary.
(3)Pressurize water system (Ref. 38-40-00, P. Block 301).
(4)Remove safety clips and tags and close circuit breaker 10MG, 110MG, 11MG and 111MG.
(5)Open water shutoff valve.
(6)Flush toilet assy a few times and check for normal operation.
(7)Inspect potable water connections for leaks.
NOTE : Leaks are not permitted.
(8)Depressurize water system (Ref. 38-40-00, P. Block 301).

H. Close-Up for Lavatory A, T, W, Y and Z
(1)Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.
(2)Remove container.
(3)Clean and dry the work area with a clean lint-free cloth.
(4)Install toilet shroud (Ref. 25-45-11, P. Block 401).
(5)Close sanitary unit cabinet door of the appropriate lavatory.
(6)De-energize aircraft electrical network (Ref. 24-41-00, P. Block 301) and disconnect ground power unit.

J. Close-Up for Lavatory X
(1)Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.
(2)Remove container.
(3)Clean and dry the work area with a clean lint-free cloth.
(4)Install toilet shroud (Ref. 25-45-11, P. Block 401).
(5)Close access panel of water shutoff valve.
(6)De-energize aircraft electrical network (Ref. 24-41-00, P. Block 301) and disconnect ground power unit.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps
B.	Circuit Breaker Safety Clips and Tags
C.	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz
D.	Corrosion-Resistant Steel Lockwire, 0.5 mm (0.020 in.) dia
R E.	Packing

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 24-41-00, P. Block 301	AC External Power Control
- 25-45-11, P. Block 401	Toilet Shroud
- 38-40-00, P. Block 301	Air Supply

2. Procedure

A. Job Set-Up
(1)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(2)Close manual shutoff valve in sanitary unit cabinet.
(3)Remove toilet shroud (Ref. 25-45-11, P. Block 401).

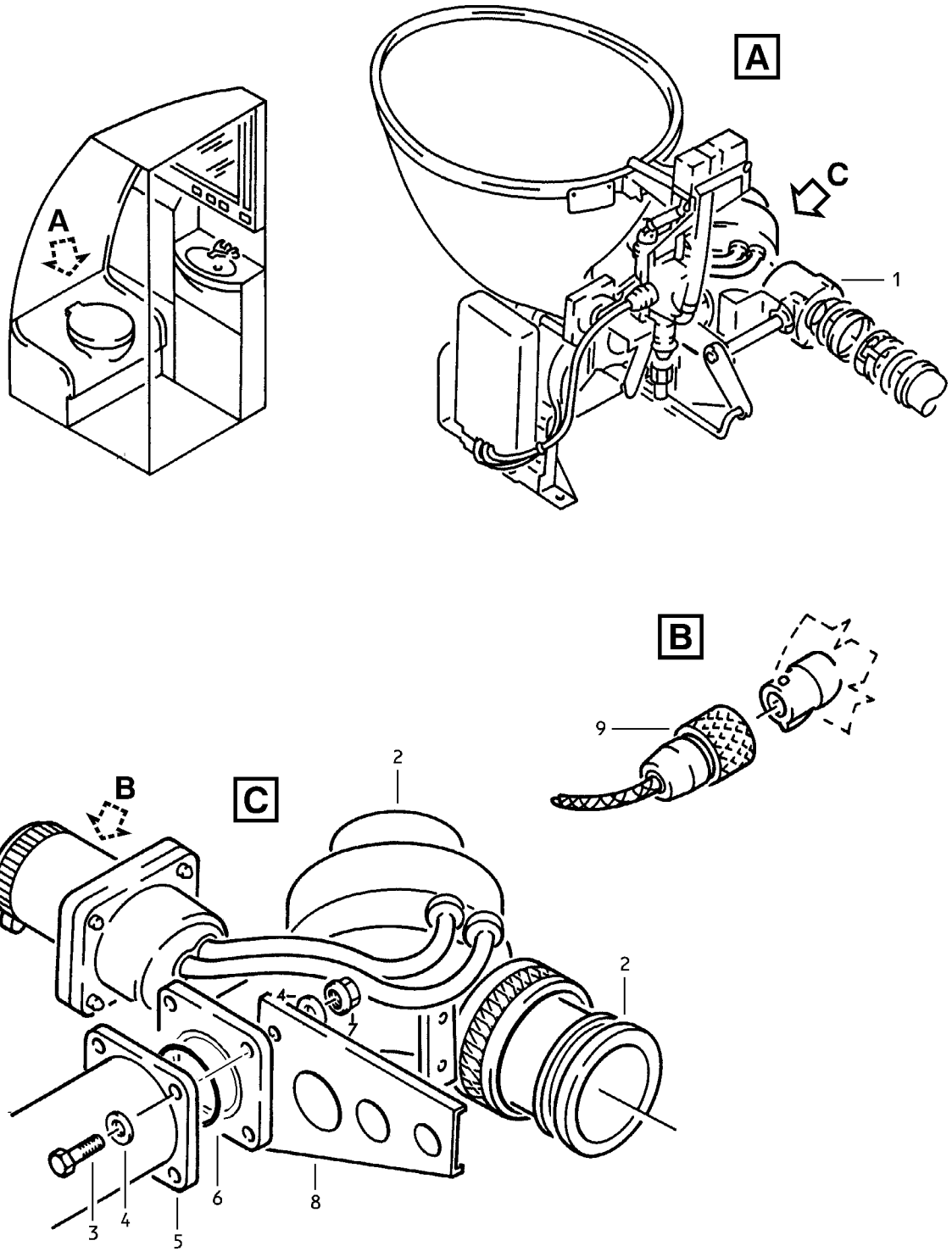
B. Removal
(Ref. Fig. 401)
(1)Remove flush valve (2) as follows:
NOTE : The flush valve is installed in all toilet assemblies therefore only the removal of one flush valve is described and applies to LH and RH toilet assemblies.
(a)Remove shutoff valve (1) (Ref. 38-35-23, P. Block 401).
(b)Remove lockwire and disconnect plug (9) from flush valve (2).
(c)Remove nuts (7), washers (4), bolts (3) and bracket (8).
(d)Remove flush valve (2) from flange (5).
(e)Remove and discard packing (6).
(f)Install blanking caps to flange (5) and flush valve (2).

R C. Preparation for Installation (Ref. Fig. 401)
R (1)Make certain that flush valve (2) is clean and free from unwanted
R material.
(2)Remove blanking caps from flange (5) and flush valve (2).

D. Installation (Ref. Fig. 401)
R (1)Install new packing (6) to flush valve (2).
(2)Position flush valve (2) on flange (5).
(3)Position bracket (8) on flush valve (2).
(4)Install bolts (3), washers (4) and nuts (7).
(5)Connect plug (9) to flush valve (2) and safety with lockwire.
(6)Install shutoff valve (1) (Ref. 38-35-23, P. Block 401).

E. Test
(1)Connect electrical gound power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
R (2)Make certain that electronics racks ventilation is correct.
R (3)Replenish potable water system (Ref. 12-15-38, P. Block 1) if necessary and pressurize water system (Ref. 38-40-00, P. Block 301).
R (4)Remove safety clips and tags and close circuit breakers 10MG, 110MG, 11MG and 111MG.
R (5)Open manual shutoff valve in sanitary cabinet.
R (6)Flush toilet assy a few times and check for normal operation.
R (7)Inspect flush valve (2) and shutoff valve (1) connections for leakage.
NOTE : Leakage is not permissible.

F. Close-Up
(1)Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.
(2)Install toilet shroud (Ref. 25-45-11, P. Block 401).
(3)De-energize aircraft electrical network (Ref. 24-41-00, P. Block 301) and disconnect ground power unit.



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Flush Valve
Figure 401

1. Reason for the Job

A. Removal/Installation of rinse nozzle

B. Cleaning of rinse nozzle

2. Equipment and Materials

	ITEM	DESIGNATION
	A.	Access Platform, 2.30 m (7.50 ft.)
	B.	Blanking Caps
	C.	Circuit Breaker Safety Clips and Tags
	D.	O-Rings
	E.	Torque Wrench, up to 0.8 m.daN (70 lbf. in.)
	F. Material No. 04-012	Common Greases (Ref. 20-31-00)
R	G. Material No. 08-007	Bonding and Adhesive Compounds (Ref. 20-31-00)
R	H. Decalcification Detergent	Commercial
R	J.	Metal Vessel

Referenced Procedure

- 12-16-38, P. Block 1	Replenishing Toilets

3. Procedure

A. Job Set-Up

(1)Drain and flush waste tank (1) (Ref. 12-16-38, P. Block 1).

NOTE : Do not prime waste tank at this stage.

(2)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(3)Position access platform at BULK cargo compartment.

(4)Open BULK cargo compartment door (Z813).

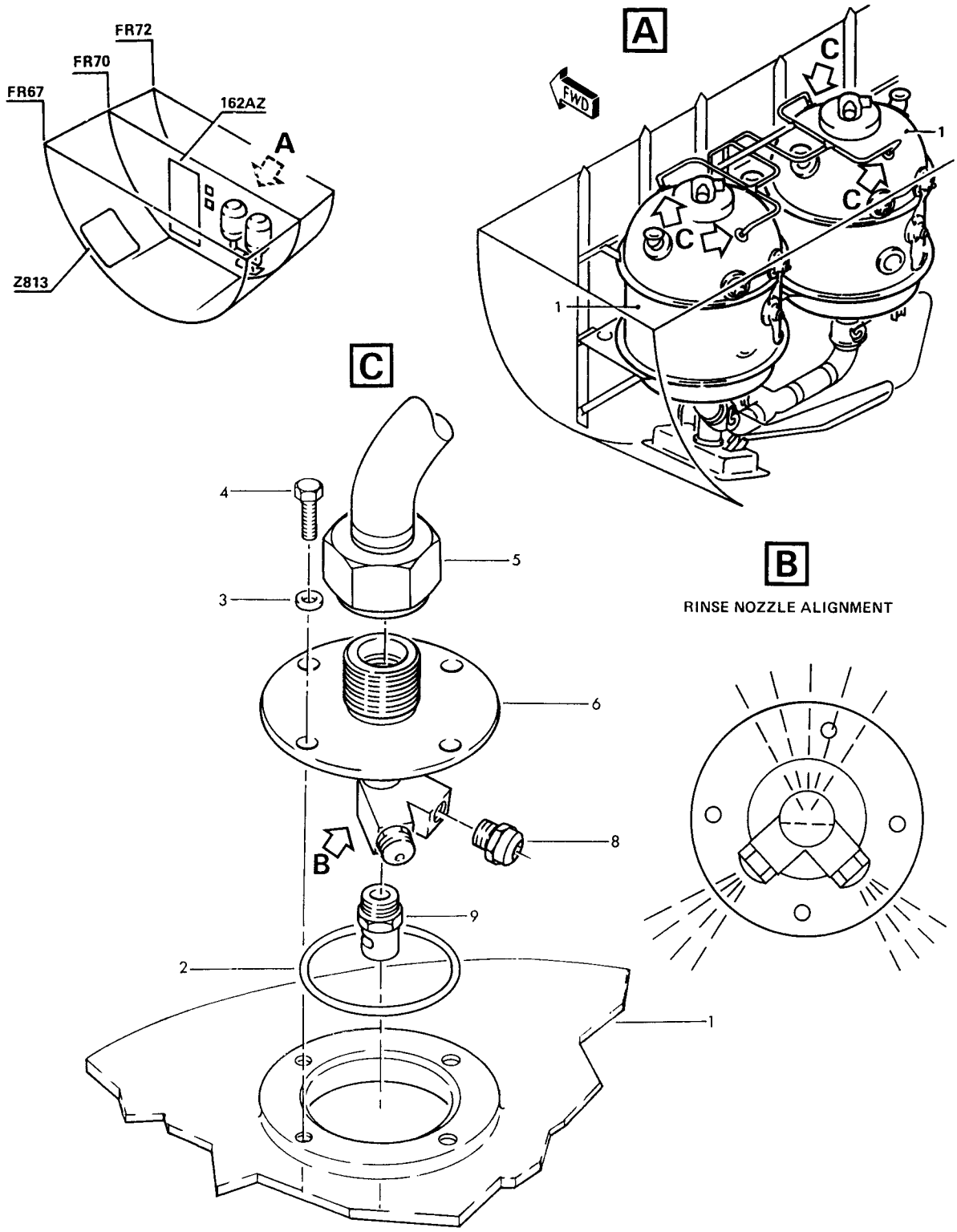
(5)Open access door (162AZ).

B. Removal
(Ref. Fig. 201)
(1)Remove rinse nozzle (6) as follows:
NOTE : Each waste tank (1) is fitted with two rinse nozzles (6). All rinse nozzles (6) are identical, therefore the removal of only one rinse nozzle (6) is described.
(a)Remove and cap flush line (5) from rinse nozzle (6).
(b)Remove self-locking bolts (4) and washers (3).
(c)Pull rinse nozzle (6) from waste tank (1).
(d)Remove and discard O-Ring (2).
(e)Install blanking cap to opening in waste tank (1).

C. Cleaning
R NOTE : There are two cleaning procedures for the rinse nozzle. One for
R the assembled nozzle and one for the disassembled nozzle. You can
R use either procedure.
R (1)Cleaning of rinse nozzle assembly.
R (a)Soak rinse nozzle (6) in decalcification detergent for a while.
R (b)Rinse nozzle with clear water.
R (c)Blow out nozzle caps (8) and floodjet (9) holes with compressed air.
R (2)Cleaning of disassembled rinse nozzle.
R (a)Disassemble rinse nozzle (6).
R 1 Remove (two) nozzle caps (8) and (one) floodjet (9) from rinse
R nozzle body (6).
R (b)Clean the following parts using decalcification detergent:
R 1 Nozzle caps (8), floodjet (9) and rinse nozzle body (6).
R 2 Let fluid affect parts for a while.
R 3 Clean parts using a brush and wipe dry with a cloth.
R (c)Assemble rinse nozzle (6) as follows:
R 1 Apply LOCKTITE (Mat. No. 08-007) to the threads of the
R nozzle caps (8) and the floodjet (9).
R 2 Install (one) floodjet (9) and (two) nozzle caps (8).
R 3 Orient the nozzles as shown in detail C on the illustration.
R 4 TORQUE the nozzle caps (8) and the floodjet (9)
R to 0.678 ±0.112 m.daN (60 ±10 lbf. in.).

D. Preparation for Installation
(1)Make certain that rinse nozzle (6) is clean.
(2)Install new O-Ring (2) to rinse nozzle (6).
(a)Apply grease (Mat. No. 04-012) to the O-ring (2) prior to installation.
(3)Make certain that installation area is clean and clear of tools and miscellaneous items of equipment.

E. Installation (Ref. Fig. 201)
(1)Remove blanking cap from waste tank (1).
(2)Install rinse nozzle (6) as follows:
NOTE : Rinse nozzle assembly has an offset bolt hole for nozzle position orientation.
(a)Insert rinse nozzle (6) in waste tank (1).
(b)Install self-locking bolts (4) and washers (3).
(c)TORQUE self-locking bolts (4) to 0.339 ±0.056 m.daN (30 ±5 lbf. in.).



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Rinse Nozzle
Figure 201

R

(d)Remove blanking cap from flush line (5) and connect flush line (5) to rinse nozzle (6).

F. Test

(1)Flush waste tank (1) (Ref. 12-16-38, P.Block 1) and inspect flush line connection and rinse nozzle flange for leakage.
NOTE : Leakage is not permissible.

G. Close-Up

(1)Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.
(2)Close access door (162AZ).
(3)Close BULK cargo compartment door (Z813).
(4)Remove access platform.
(5)Remove safety clips and tags and close circuit breaker 10MG, 110MG, 11MG and 111MG.
(6)Replenish waste tanks (1) (Ref. 12-16-38, P. Block 1), if necessary.

WATER SEPARATOR - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.30 m (7.50 ft.)
B.	Blanking Caps
C.	Bristle Brush
D.	Circuit Breaker Safety Clips and Tags
E.	O-Rings
F.	Seals
G. Material No. 11-001	Cleaning Agents (Ref. 20-31-00)

Referenced Procedure

- 12-16-38, P. Block 1	Replenishing Toilets

2. Procedure

A. Job Set-Up

(1) Drain and flush waste tank (1) (Ref. 12-16-38, P. Block 1).

NOTE : Do not prime waste tank at this stage.

(2) Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(3) Position access platform at BULK cargo compartment.

(4) Open BULK cargo compartment door (Z813).

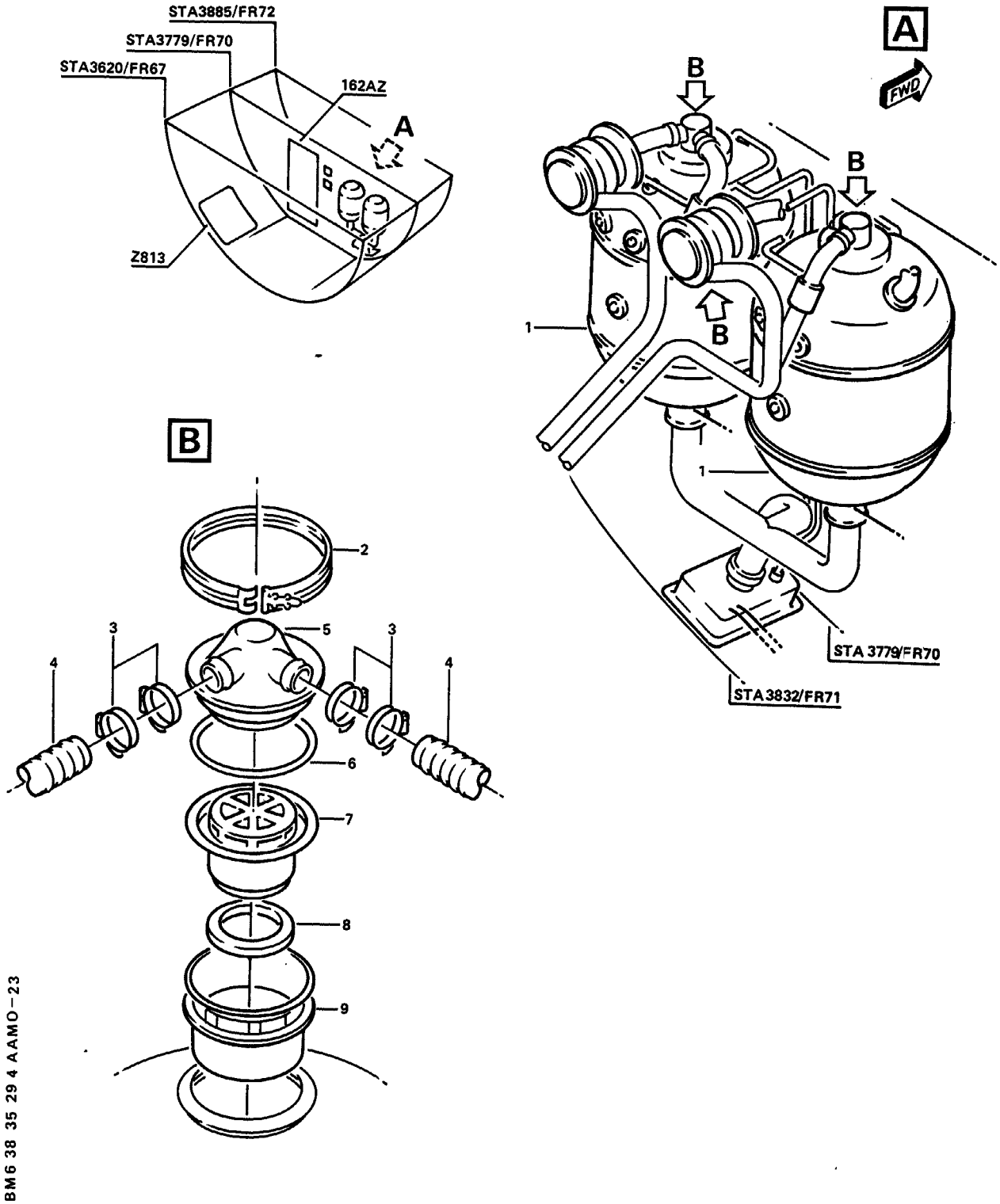
(5) Open access door (162AZ).

B. Removal
(Ref. Fig. 401)
(1)Remove water separator assemblies as follows:
NOTE : LH and RH water separator assemblies are identical therefore the removal of only one water separator is described.
(a)Remove clamps (3) and disconnect hoses (4).
(b)Remove clamp (2) at waste tank (1).
(c)Remove air outlet cap (5) with O-ring (6).
R (d)Remove water separator filter element (7) with seal (8).
(e)Remove water separator inlet assembly (9) from waste tank (1).
(f)Discard used O-ring (6) and seal (8).
(g)Fit blanking caps to waste tank and disconnected hoses.

C. Preparation for Installation
R (1)Make sure that water separator assembly is clean.
(2)If necessary clean water separator assembly as follows:
(a)Clean the water separator components in warm water, 40°C (104°F) max. and detergent (Mat. No. 11-001).
1 Scrub inlet assembly (9) with bristle brush.
R 2 Hand agitate the separator filter element (7) to clean filter.
R 3 If the filter element (7) can not be cleaned, replace it.

D. Installation (Ref. Fig. 401)
(1)Remove blanking caps from waste tank and disconnected hoses.
(2)Insert water separator inlet assembly (9) in waste tank (1)
R (3)Insert water separator filter element (7) with new seal (8) into separator inlet assembly (9).
(4)Fit air outlet cap (5) with new O-ring (6).
(5)Fit clamp (2) at waste tank (1).
NOTE : At this stage do not tighten clamp.
(6)Position air outlet cap (5) so that hoses (4) can be easily connected.
(7)Connect hoses (4) to air outlet cap (5).
(8)Fit clamps (3) to hoses (4).
(9)Tighten all clamps (2) and (3).

E. Close-Up
(1)Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.
(2)Close access door (162AZ).
(3)Close BULK cargo compartment door (Z813).
(4)Remove access platform.
(5)Remove safety clips and tags and close circuit breaker 10MG, 110MG, 11MG and 111MG.
(6)Replenish waste tanks (1) (Ref. 12-16-38, P. Block 1), if necessary.



Water Separator
Figure 401

1. Equipment and Materials

ITEM	DESIGNATION
A.	Circuit Breaker Safety Clips and Tags
B.	Blanking Caps
C.	Access Platform, 2.3 m (7.5 ft.)

Referenced Procedure

- 38-35-31, P. Block 501	Logic Control Unit

2. Procedure

A. Job Set-Up
(1)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12

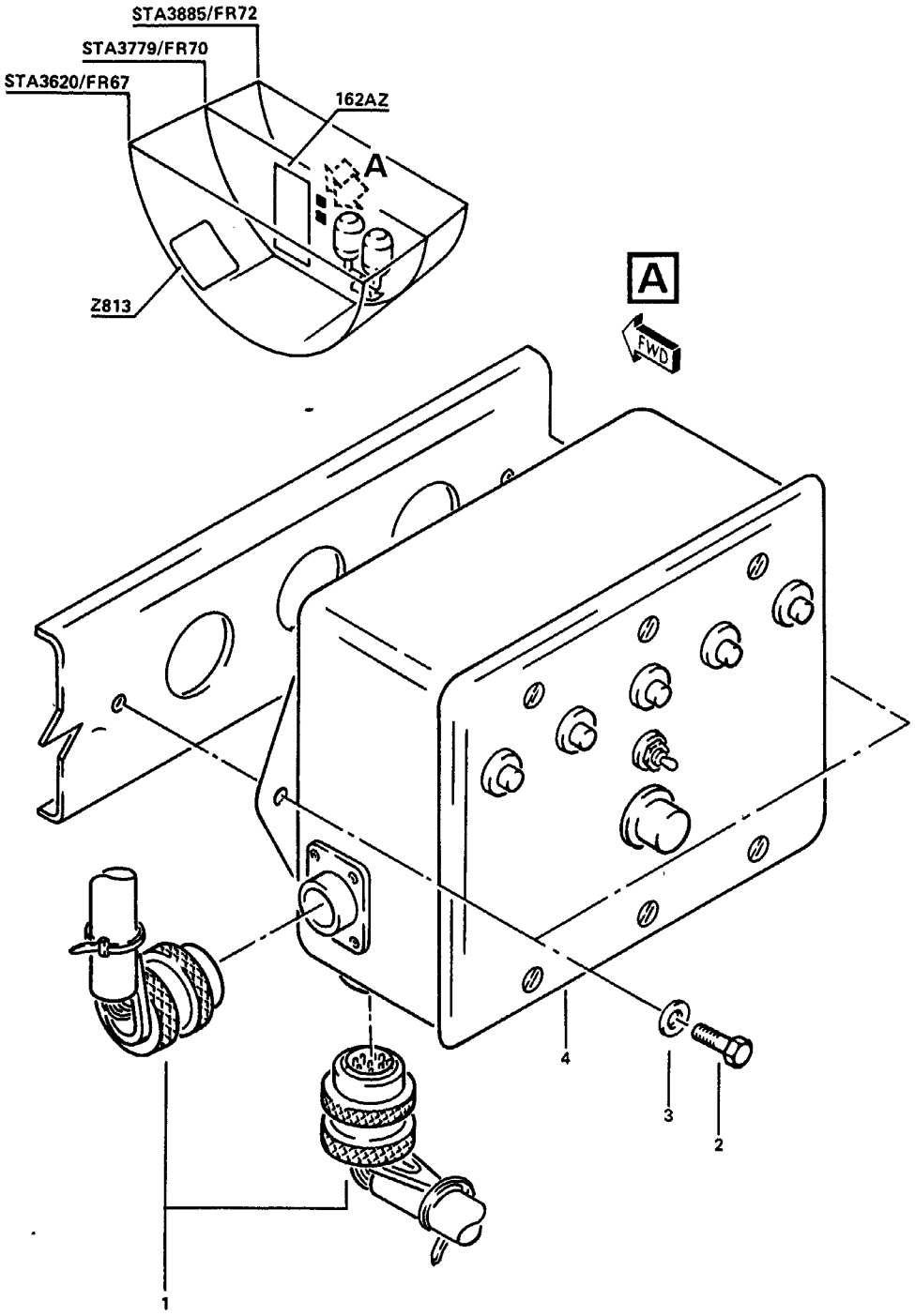
(2)Position access platform at BULK cargo compartment.
(3)Open BULK cargo compartment door (Z813).
(4)Open access door (162AZ).

B. Removal
(Ref. Fig. 401)
(1)Remove logic control unit:
(a)Disconnect electrical connectors (1) and fit blanking caps.
(b)Remove bolts (2), washers (3) and logic control unit (4).

C. Installation (Ref. Fig. 401)
(1)Install logic control unit:
(a)Position logic control unit (4), install washers (3) and bolts (2).
(b)Make sure that the switch is in the OFF position.
(c)Remove blanking caps and connect electrical connectors (1).

D. Test
(1)Remove safety clips and tags and close circuit breakers 11MG and 111MG.
(2)Do the LCU functional test (Ref. 38-35-31, P. Block 501).

E. Close-Up
(1)Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.
(2)Close access door (162AZ)
(3)Close BULK cargo compartment door (Z813).
(4)Remove access platform.



Logic Control Unit
Figure 401

LOGIC CONTROL UNIT - ADJUSTMENT/TEST

1. Reasons for the Job

To make certain that logic control unit and level sensor operate correctly.

- Functional Test of Logic Control Unit
- Functional Test of Waste Level Sensors

2. Equipment and Materials

ITEM	DESIGNATION
A.	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz
B.	Access Platform, 2.3 m (7.5 ft.)
C.	Metal Vessel
D.	Stopwatch

Referenced Procedures

- 12-16-38, P. Block 1	Replenishing Toilets
- 20-28-11, P. Block 1	Electrical Bonding
- 24-41-00, P. Block 301	AC External Power Control
- 38-35-32, P. Block 401	Waste Level Sensor

3. Operational Test from Purser's Panel (863VU)

A. Job Set-Up
(1)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(2)Make certain that electronics racks ventilation is correct.
(3)Make certain that the following circuit breakers are closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12

B. Test

ACTION	RESULT
1. On Purser's panel (863VU): - Pushbutton WASTE TANK FULL LH (115MG) or FULL RH (15MG) is in normal position.	On Purser's panel (863VU): - Integral indicator light in pushbutton WASTE TANK FULL LH (115MG) or FULL RH (15MG) is off.
2. On Purser's panel (863VU): - Press pushbutton WASTE TANK FULL LH (115MG) or FULL RH (15MG).	On Purser's panel (863VU): - Integral indicator light in push-button WASTE TANK FULL LH (115MG) or FULL RH (15MG) comes on. NOTE : Tank full indication light (15MG) or (115MG) when pushed to test will remain on until test cycle is completed.

C. Close-Up
(1)Make certain that working area is clean and clear of miscellaneous items of equipment.
(2)De-energize aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

4. LCU - Functional Test

A. Job Set-Up
(1)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(2)Make certain that electronics racks ventilation is correct.
(3)Make certain that the following circuit breakers are closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12

(4)Position access platform at BULK cargo compartment.
(5)Open BULK cargo compartment door (Z813).
(6)Open access door (162AZ).
(7)Drain and flush waste tank (Ref. 12-16-38, P. Block 1).
NOTE : Do not prime waste tank at this stage.

B. Test
(Ref. Fig. 501)

ACTION	RESULT
1. On LCU - BITE TEST: - switch is in OFF position.	On LCU: LED indication of: - sensor A is OFF - sensor B is OFF - sensor C is OFF - TANK FULL is OFF - POWER ON is ON. On Purser's panel: Indication light WASTE TANK FULL/LH115MG or FULL/RH15MG: Integral indicator light is off.
2. On LCU - LAMP TEST: - position and hold switch to LAMP TEST.	On LCU: LED indication of: - sensor A comes ON - sensor B comes ON - sensor C comes ON - TANK FULL comes ON - POWER ON remains ON. On Purser's panel: Indication light WASTE TANK FULL/LH115MG or FULL/RH15MG: Integral indicator light is OFF.
3. On LCU - SENSOR TEST: - position and hold switch to SENSOR TEST.	On LCU: LED indication of: - sensor A comes ON - sensor B comes ON

ACTION	RESULT
	- sensor C comes ON - TANK FULL comes ON - POWER ON remains ON. On Purser's panel: Indication light FULL/LH115MG or FULL/RH15MG comes on.

C. Close-Up
(1)Make certain that working area is clean and clear of miscellaneous items of equipment.
(2)Close access door (162AZ).
(3)Close BULK cargo compartment door and remove access platform.
(4)De-energize aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

5. LEVEL SENSOR - Functional Test

A. Job Set-Up
NOTE : For electrical bonding procedure, refer to 20-28-11, P. Block 1.
(1)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(2)Make certain that electronics racks ventilation is correct.
(3)Make certain that the following circuit breakers are closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12

(4)Remove waste level sensors (Ref. 38-35-32, P. Block 401).
NOTE : Reconnect electrical connectors and bonding straps to waste level sensors.
(5)Prepare a test fluid by mixing 3.3 l (0.871 US gal.) of water with 0.013 kg (0.028 lb.) of salt.
(6)Connect metal vessel via bonding strap to bonding point at waste tank.
(7)Pour 25.4 mm (1.0 in.) test fluid into metal vessel.

B. Test

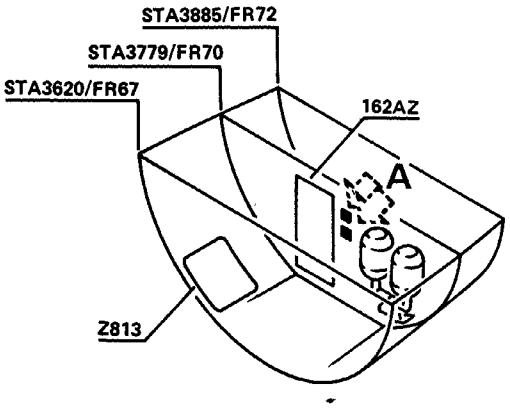
ACTION	RESULT
R 1. On LCU - SENSOR DELAY TIMER TEST: - switch is in OFF position.	
- submerge the sensing surface of sensor A in 12.7 mm (0.5 in.) of test fluid in prepared metal vessel and start stopwatch	ON LCU: LED indication of: - sensor A comes ON after 18 - 30 secs - sensor B remains OFF - sensor C remains OFF

	ACTION	RESULT
	simultaneously.	- TANK FULL comes ON after 18 - 30 secs - POWER ON remains ON.
	- repeat test with sensor B.	LED indication of: - sensor A is OFF - sensor B comes ON after 18 - 30 secs - sensor C remains OFF - TANK FULL comes ON after 18 - 30 secs - POWER ON remains ON.
	- repeat test with sensor C.	LED indication of: - sensor A remains OFF - sensor B is OFF - sensor C comes ON after 18 - 30 secs - TANK FULL is OFF - POWER ON remains ON.
R	2. On LCU - OPEN SENSOR TEST: - switch is in OFF position. - submerge sensing surfaces of sensors A, B and C in test fluid in prepared metal vessel.	
	- Disconnect harness from sensor A.	On LCU, LED indication of: - sensor A is OFF - sensor B is ON - sensor C is ON - TANK FULL is ON - POWER ON remains ON. On Purser's panel (863VU): - TANK FULL light comes ON - TANK 2/3 FULL light comes ON. NOTE : Indication light TANK 2/3 FULL on Purser's panel (863VU) is optional.
R R R	- Connect electrical connector 119MG-A LH and 19MG-A RH to sensor A. - Disconnect electrical connector 120MG-A LH and 20MG-A RH from sensor B.	On LCU, LED indication of: - sensor A comes ON - sensor B goes OFF - sensor C remains ON - TANK FULL remains ON - POWER ON remains ON. On Purser panel (863VU): - TANK FULL light remains ON - TANK 2/3 FULL light remains ON. NOTE : Indication light TANK 2/3 FULL on Purser's panel (863VU) is optional.

ACTION	RESULT
- Connect electrical connector 120MG-A LH and 20MG-A RH to sensor B.	On LCU, LED indication of: - sensor A remains ON - sensor B comes ON
R - Disconnect electrical connector R 121MG-A LH and 21MG-A RH R from sensor C.	- sensor C goes OFF - TANK FULL remains ON - POWER ON remains ON. On Purser panel (863VU): - TANK FULL light remains ON - TANK 2/3 FULL light goes OFF. NOTE : Indication light TANK 2/3 FULL on Purser's panel (863VU) is optional.
- Connect electrical connector R 121MG-A LH and 21MG-A RH R to sensor C.	On LCU, LED indication of: - sensor C comes ON
R - Disconnect electrical connector R 119/120 MG-A LH and 19/20MG-A RH R from sensor A and B.	- sensor A goes OFF - sensor B goes OFF - TANK FULL goes OFF - POWER ON remains ON. On Purser's panel (863VU): - TANK FULL light goes OFF - TANK 2/3 FULL light comes ON. NOTE : Indication light TANK 2/3 FULL on Purser's panel (863VU) is optional.

(Ref. Fig. 501)

C. Close-Up
(1)Install waste level sensors (Ref. 38-35-32, P. Block 401).
(2)Remove metal vessel.
(3)Make certain that working area is clean and clear of miscellaneous items of equipment.
(4)Close access door (162AZ).
(5)Close BULK cargo compartment door and remove access platform.
(6)De-energize aircraft electrical network, and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).



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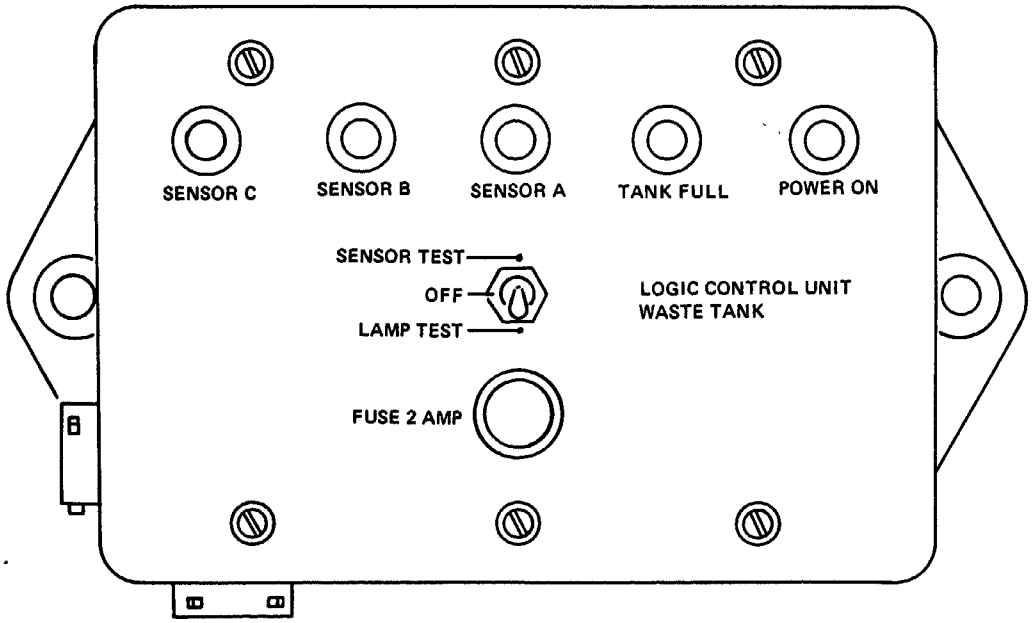


BM 6 38 35 31 5 AA M 0-23

Logic Control Unit
Figure 501

WASTE LEVEL SENSOR - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.30 m (7.50 ft.)
B.	Blanking Caps
C.	Circuit Breaker Safety Clips and Tags
D.	O-Ring
E.	Torque Wrench, up to 0.5 m.daN (44 lbf.in.)
F. Material No. 04-012	Common Greases (Ref. 20-31-00)

Referenced Procedures

- 12-16-38, P. Block 1	Replenishing Toilets
- 20-28-11, P. Block 1	Electrical Bonding
- 38-35-31, P. Block 501	Logic Control Unit

2. Procedure

A. Job Set-Up

(1)Drain and flush waste tank (1) (Ref. 12-16-38, P. Block 1).

NOTE : Do not prime waste tank at this stage.

(2)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(3)Position access platform at BULK cargo compartment (Z813).

(4)Open BULK cargo compartment door (Z813).

(5)Open access door (162AZ).

B. Removal
(Ref. Fig. 401)
(1)Remove waste level sensor (5) as follows:
NOTE : Each waste tank (1) is fitted with three level sensors (5). All level sensors are identical therefore the removal of only one sensor is described.
(a)Disconnect electrical plug (7) from waste level sensor (5).
(b)Remove bolts (2) with washers (3) and disconnect bonding straps (4).
(c)Pull waste level sensor (5) from waste tank (1).
(d)Remove and discard O-ring (6).
(e)Install blanking cap to opening in waste tank (1).

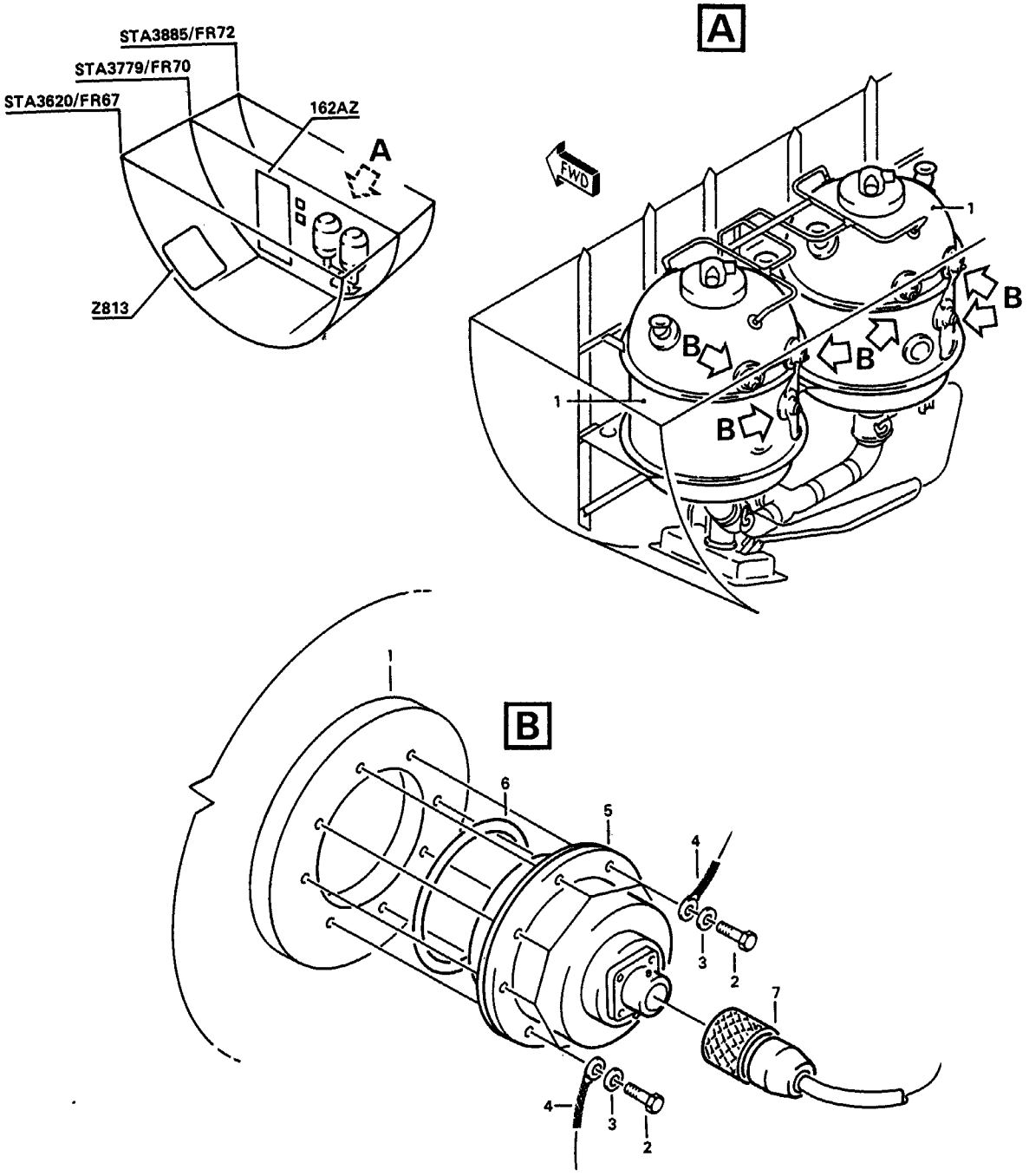
C. Preparation for Installation
(1)Make certain that waste level sensor (5) is clean.
(2)Install new O-ring (6) to waste level sensor (5).
NOTE : O-Ring must be coated with petrolatum (Mat. No. 04-012) prior to installation.

D. Installation (Ref. Fig. 401)
NOTE : For electrical bonding procedure, refer to 20-28-11, P. Block 1.

(1)Remove blanking cap from waste tank (1).
(2)Install waste level sensor (5) as follows:
(a)Insert waste level sensor (5) in waste tank (1).
(b)Position bonding straps (4) on waste level sensor (5) and install bolts (2) with washers (3).
(c)TORQUE bolts to 0.28 ± 0.06 m.daN (25 ± 5 lbf.in.).
(d)Connect electrical plug (7) to waste level sensor (5).

E. Test
(1)Flush waste tank (1) (Ref. 12-16-38, P. Block 1) and inspect waste level sensor flange for leakage.
NOTE : Leakage is not permissible.
(2)Carry out waste level sensor test (Ref. 38-35-31, P. Block 501).

F. Close-Up
(1)Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.
(2)Close access door (162AZ).
(3)Close BULK cargo compartment door (Z813).
(4)Remove access platform.
(5)Remove safety clips and tags and close circuit breakers 10MG, 11MG, 110MG and 111MG.
(6)Replenish waste tanks (1) (Ref. 12-16-38, P. Block 1), if necessary.



B M 6 38 35 32 4 AA M 0-23

Waste Level Sensor
Figure 401

FLUSH CONTROL UNIT - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Circuit Breaker Safety Clips and Tags
B.	Blanking Caps and Plugs
C.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
D.	Corrosion-Resistant Steel Lockwire 0.6 mm (0.024 in.) dia.
E.	Torque Wrench up to 0.5 m.daN (44 lbf.in.)
F. Material No. 08-007	Bonding and Adhesive Compounds (Ref. 20-31-00)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 24-41-00, P. Block 301	AC External Power Control
- 25-45-11, P. Block 401	Toilet Shroud
- 38-40-00, P. Block 301	Air Supply

2. Procedure

A. Job Set-Up

(1)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(2)Remove toilet shroud (Ref. 25-45-11, P. Block 401).

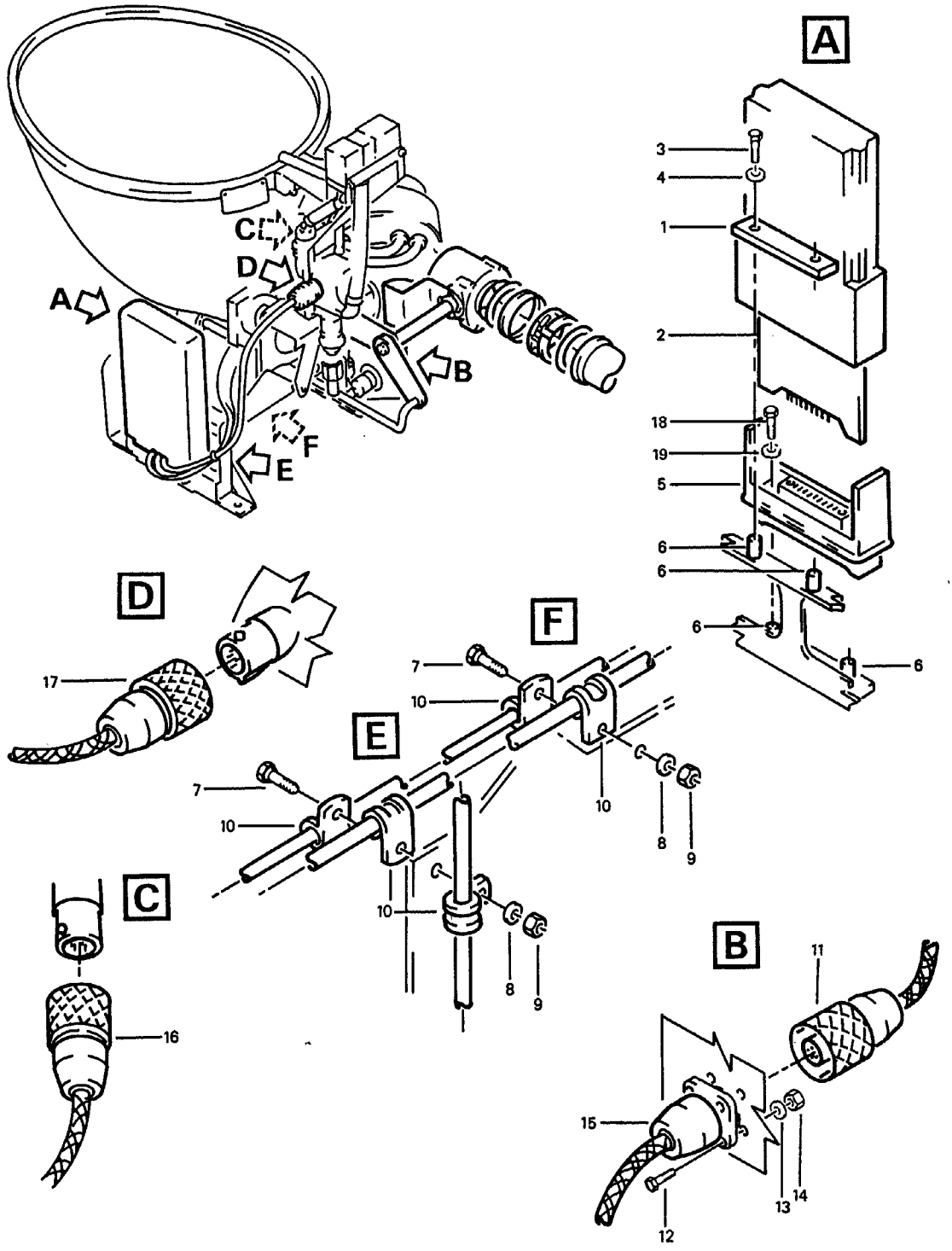
B. Removal

(Ref. Fig. 401)

(1)Remove flush control unit (1) as follows:

NOTE : The removal of flush control unit in all toilet assemblies is similar therefore only the removal of one flush control unit is described and applies to LH and RH toilet assemblies.

(a)Remove lockwire and disconnect plugs (11, 16, 17).
(b)Install blanking caps and plugs to all plugs and receptacles.
(c)Remove nuts (14, washers (13) and screws (12) to disconnect receptacle (15).
(d)Remove nuts (9), washers (8), screws (7) and clamps (10).
(e)Remove lockwire, screws (3) and washers (4).
(f)Remove cover (1) from toilet assembly.
(g)Pull PC-board (2) from flush control unit.
(h)Remove screws (18) and washers (19).
(j)Remove flush control unit base (5) from toilet assembly.



BM6 38 35 33 4 AAMO 00

Flush Control Unit
Figure 401

C. Installation (Ref. Fig. 401)
(1)Install flush control unit (1) as follows:
(a)Position flush control unit base (5) on toilet assembly.
(b)Install screws (18) and washers (19).
(c)TORQUE screws (18) to 0.23 m.daN (20 lbf.in.) and safety with adhesive compound (Mat. No. 08-007).
(d)Insert PC-board (2) into base (5).
(e)Position cover (1) on base (5).
(f)Install screws (3) and washers (4).
(g)TORQUE screws (3) to 0.23 m.daN (20 blf.in.).
(h)Safety screws (3) with lockwire.
(j)Position receptacle (15) in cutout of toilet assembly and install screws (12), washers (13) and nuts (14).
(k)Remove blanking plugs and caps from plugs and receptacles. Connect plugs (11, 16, 17) and safety with lockwire.
(l)Position clamps (10) on cable looms and install screws (7), washers (8) and nuts (9).

D. Test
(1)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(2)Make certain that electronics racks ventilation is correct.
(3)Replenish potable water system (Ref. 12-15-38, P. Block 1) if necessary and pressurize water system (Ref. 38-40-00, P. Block 301).
(4)Remove safety clips and tags and close circuit breakers 10MG, 110MG, 11MG and 111MG.
(5)Flush toilet assembly a few times and check for normal operation.

E. Close-Up
(1)Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.
(2)Install toilet shroud (Ref. 25-45-11, P. Block 401).
(3)De-energize aircraft electrical network (Ref. 24-41-00, P. Block 301) and disconnect ground power unit.

ALTITUDE PRESSURE SWITCH - REMOVAL/INSTALLATION

NOTE : The removal/installation procedure is identical for RH and LH pressure switches.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 4 m (13 ft.)
B.	Protective Caps
C.	Circuit Breaker Safety Clips and Tags

Referenced Procedure

- 38-35-00, P. Block 501	Vacuum Toilet System

2. Procedure

A. Job Set-Up
(1)Open, safety and tag the following circuit breakers:

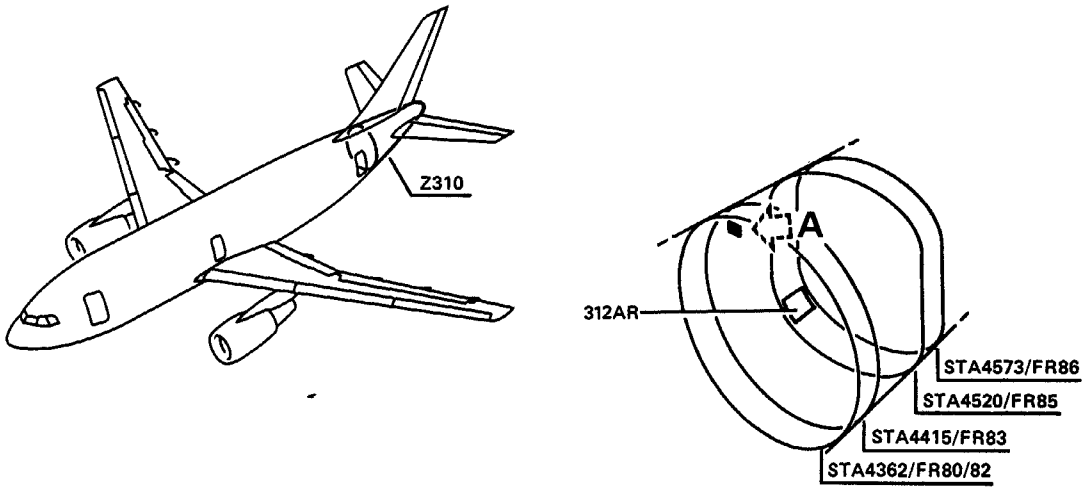
PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL LH	111MG	J10
800VU	FLUSH CTL RH	11MG	J12

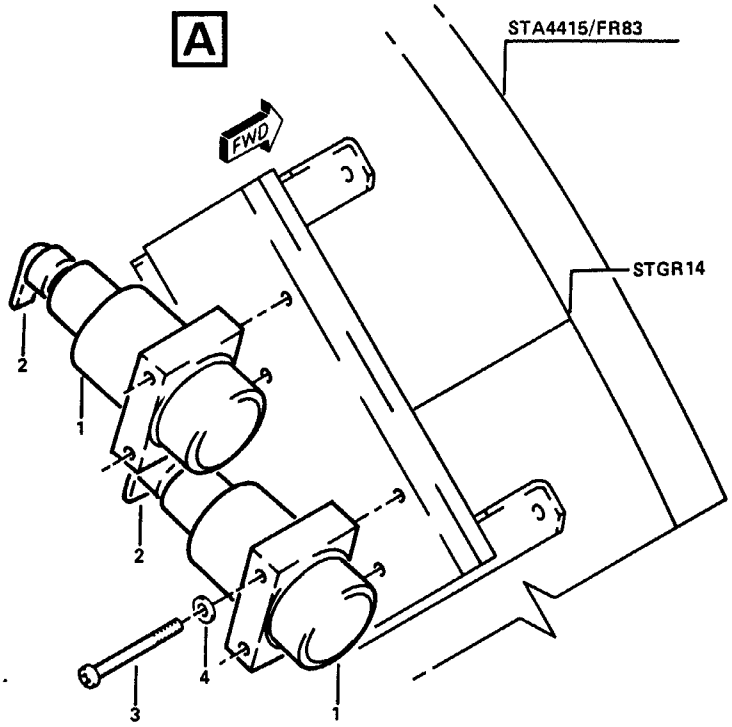
(2)Position access platform and open access door (312AR)

B. Removal
(Ref. Fig. 401)
(1)Disconnect electrical connector (2) (13MG-A or 113MG-A as applicable).
(2)Install protective cap to electrical connector.
(3)Remove screws (3), washers (4) and pressure switch (1).

C. Installation (Ref. Fig. 401)
(1)Install pressure switch (1), washers (4) and screws (3).
(2)Remove protective cap and connect electrical connector (2) (13MG-A or 113MG-A as applicable).

D. Close-Up
(1)Remove safety clips and tags and close circuit breakers 11MG and 111MG.
(2)Carry out vacuum toilet functional test (Ref. 38-35-00, P. Block 501).
(3)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(4)Close access door (312AR) and remove access platform.





B M 6 38 35 35 4 AA M 0-23

Altitude Pressure Switch
Figure 401

WATER VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Blanking Caps
B.	Circuit Breaker Safety Clips and Tags
C.	Electrical Ground Power Unit - 3-Phase 115/200 V, 400 Hz
D.	Corrosion-Resistant Steel Lockwire 0.5 mm (0.020 in.) dia
E.	Packing
F.	Torque Wrench, up to 1 m.daN (88.5 lbf.in.)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 24-41-00, P. Block 301	AC External Power Control
- 25-45-11, P. Block 401	Toilet Shroud
- 38-35-25, P. Block 401	Anti Syphon Valve
- 38-40-00, P. Block 301	Air Supply

2. Procedure

A. Job Set-Up

(1)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	FLUSH CTL/LH	111MG	J10
800VU	FLUSH CTL/RH	11MG	J12
811VU	VACUUM BLOWER/LH	110MG	C 5
811VU	VACUUM BLOWER/RH	10MG	C 8

(2)Close manual shutoff valve in sanitary unit cabinet.

(3)Remove toilet shroud (Ref. 25-45-11, P. Block 401).

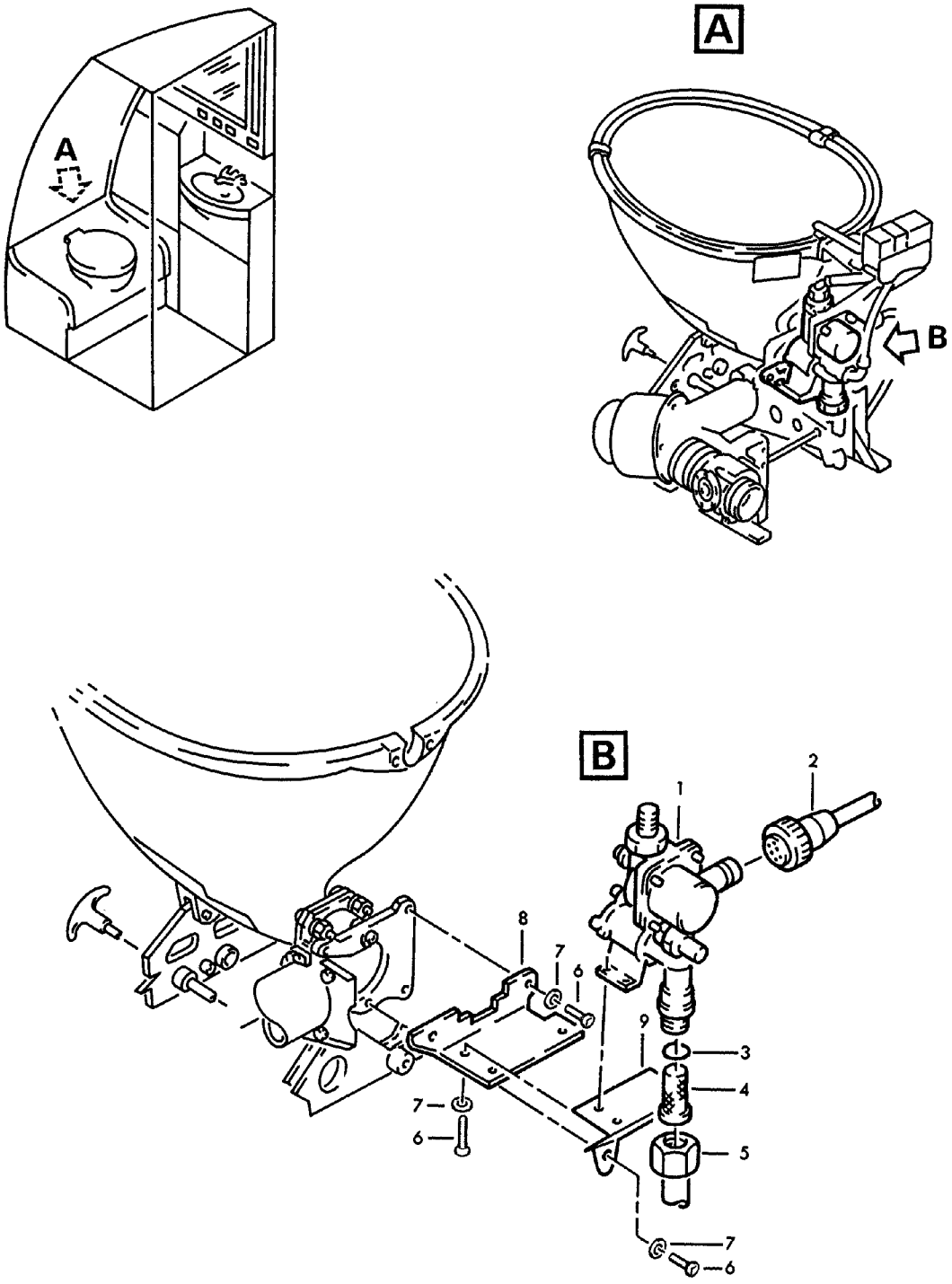
B. Removal
(Ref. Fig. 401)
(1)Remove strainer (4) as follows:
(a)Disconnect tube (5).
(b)Remove strainer (4) with packing (3). Discard packing.
(c)Install blanking caps to tube (5) and water valve (1).
(2)Remove water valve (1) as follows:
NOTE : The removal of water valve in all toilet assemblies is similar, therefore only the removal of one water valve is described and applies to LH and RH toilet assemblies.
(a)Remove anti syphon valve and attachment assemblies (Ref. 38-35-25, P. Block 401).
(b)Remove lockwire and disconnect plug (2).
(c)Remove screws (6) with washers (7).
(d)Remove water valve from brackets (8, 9).
(e)Install blanking caps to all remaining openings in water valve (1).

C. Preparation for Installation (Ref. Fig. 401)
(1)Make certain that water valve (1) and strainer (4) are clean and no external damage is visible.
(2)Make certain that installation area is clean and clear of tools and miscellaneous items of equipment.

D. Installation (Ref. Fig. 401)
(1)Install water valve (1) as follows:
(a)Remove all blanking caps from water valve (1).
(b)Install new packing (3) to strainer (4).
(c)Position water valve (1) on brackets (8, 9).
(d)Install bolts (6) with washers (7).
(e)TORQUE bolts (6) to 0.395 m.daN (35 lbf.in.).
(f)Connect plug (2) to water valve (1) and safety with lockwire.
(g)Install anti syphon valve (Ref. 38-35-25, P. Block 401).
(2)Install strainer (4) as follows:
(a)Remove blanking cap from tube (5).
(b)Insert strainer (4) in water valve (1).
(c)Connect tube (5) to water valve (1).

E. Test
(1)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(2)Make certain that electronics racks ventilaion is correct.
(3)Replenish potable water system (Ref. 12-15-38, P. Block 1) if necessary and pressurize water system (Ref. 38-40-00, P. Block 301).
(4)Remove safety clips and tags and close circuit breakers 10MG, 110MG, 11MG and 111MG.
(5)Open manual shutoff valve in sanitary unit cabinet.
(6)Flush toilet assy a few times and check for normal operation.
(7)Inspect all previously disconnected connections for leakage.
NOTE : Leakage is not permissible.

F. Close-Up



BM6 38 35 37 4 AAMO 00

Water Valve
Figure 401

(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Install toilet shroud (Ref. 25-45-11, P. Block 401).
(3)De-energize aircraft electrical network (Ref. 24-41-00, P. Block 301). and disconnect ground power unit.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platforms up to 2.30 m (7.50 ft.)
B. Material No. 05-002	Special Materials (Ref. 20-31-00)
C. Material No. 05-013	Special Materials (Ref. 20-31-00)
D. Material No. 09-019	Sealants (Ref. 20-31-00)
E. Material No. 11-004	Cleaning Agents (Ref. 20-31-00)

Referenced Procedure

- 12-16-38, P. Block 1	Replenishing Toilets
- 51-75-10, P. Block 801	Repair of Paint Coatings

2. Procedure

A. Job Set-Up

(1)Position access platform at toilet service panel access door (171BL).
(2)Open access door (171BL) to gain access to toilet service panel.
R (3)Make certain that waste system dump valves are closed.
R (4)Display warning notices at waste system dump valve control lever
R prohibiting operation of waste system dump valves.
(5)Position access platform at BULK cargo compartment.
(6)Open BULK cargo compartment door (Z813).
(7)Open access door (162AZ).

B. Removal
(Ref. Fig. 401)

R **ON A/C 001-100, 103-103, 106-106,

R Post SB 38-2026 For A/C 001-100,103-103,106-106,

(Ref. Fig. 402)

**ON A/C ALL

(1)Remove clamp (3).
(2)Open cap (4).
(3)Remove and discard cover seal (5).
(4)Remove countersunk screws (2).
(5)Remove drain and cap assy (1).

C. Preparation for Installation
(1)Clean mating surfaces of toilet servicing panel and drain and cap assy (1) with cleaning agent (Mat. No. 11-004).
(2)Apply release agent (Mat. No. 05-013) to mating surfaces of toilet servicing panel and drain and cap assy (1).
(3)Apply sealant (Mat. No. 09-019) to mating surface of drain and cap assy (1) (Ref. 51-76-10, P. Block 801).
(4)Check anchor nuts for damage and replace if necessary.

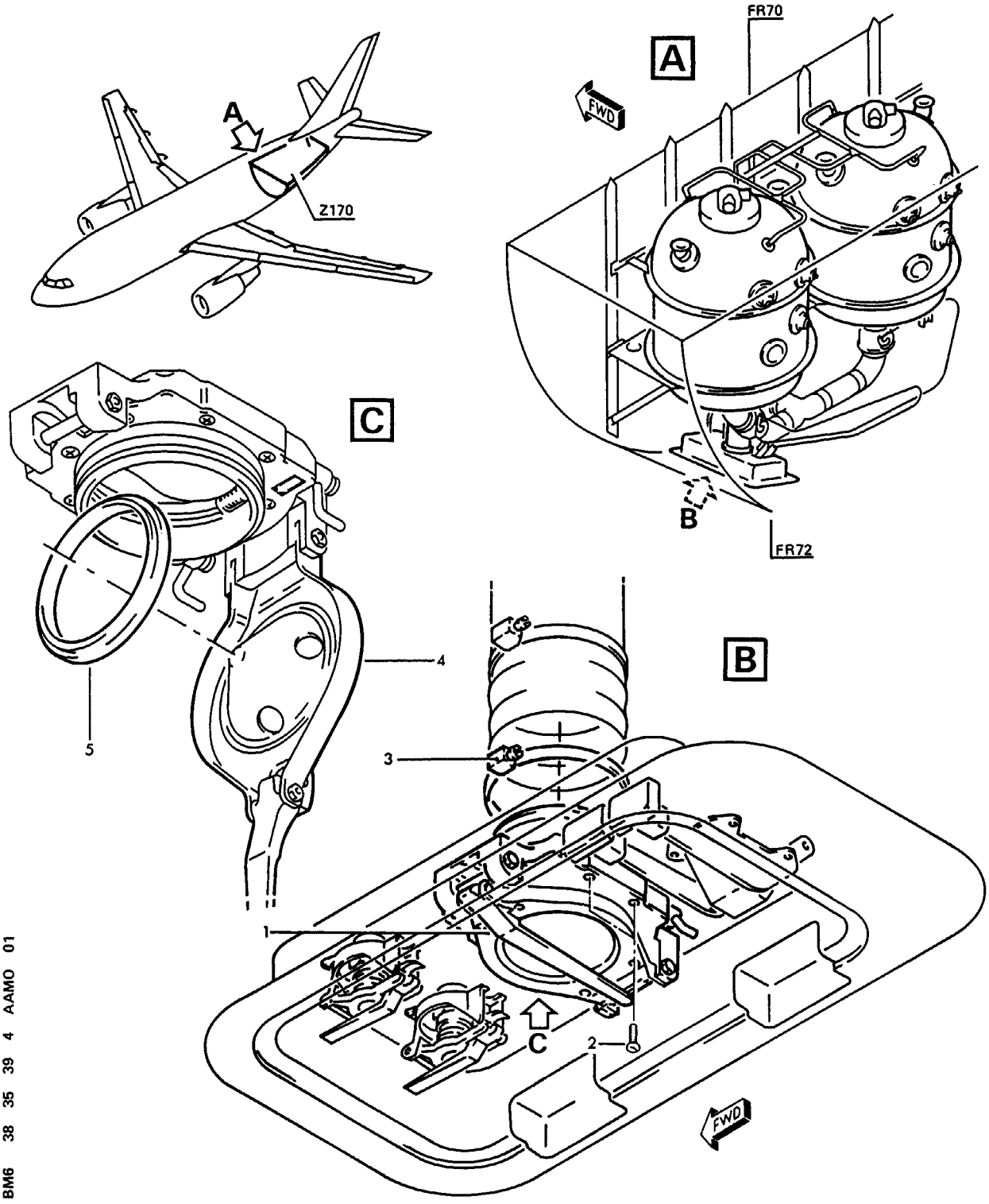
R **ON A/C 001-100, 103-103, 106-106,

R Post SB 38-2026 For A/C 001-100,103-103,106-106,

(1)Remove the clamp (9).
(2)Pull the locking handle (2) to unlock and open the outer cap (3).
(3)Remove and discard the O-ring (4).
(4)Push the PUSH TO OPEN lever (7) to open the spring loaded flap (5).
(5)Remove and discard the O-ring (6).
(6)Remove the screws (8).
(7)Remove the drain and cap assy (1).

C. Preparation for Installation
(1)Clean mating surfaces of toilet servicing panel and drain and cap assy (1) with cleaning agent (Mat. No. 11-004).
(2)Apply release agent (Mat. No. 05-013) to mating surfaces of toilet servicing panel and drain and cap assy (1).
(3)Apply sealant (Mat. No. 09-019) to mating surface of drain and cap assy (1) (Ref. 51-76-10, P. Block 801).
(4)Check anchor nuts for damage and replace if necessary.

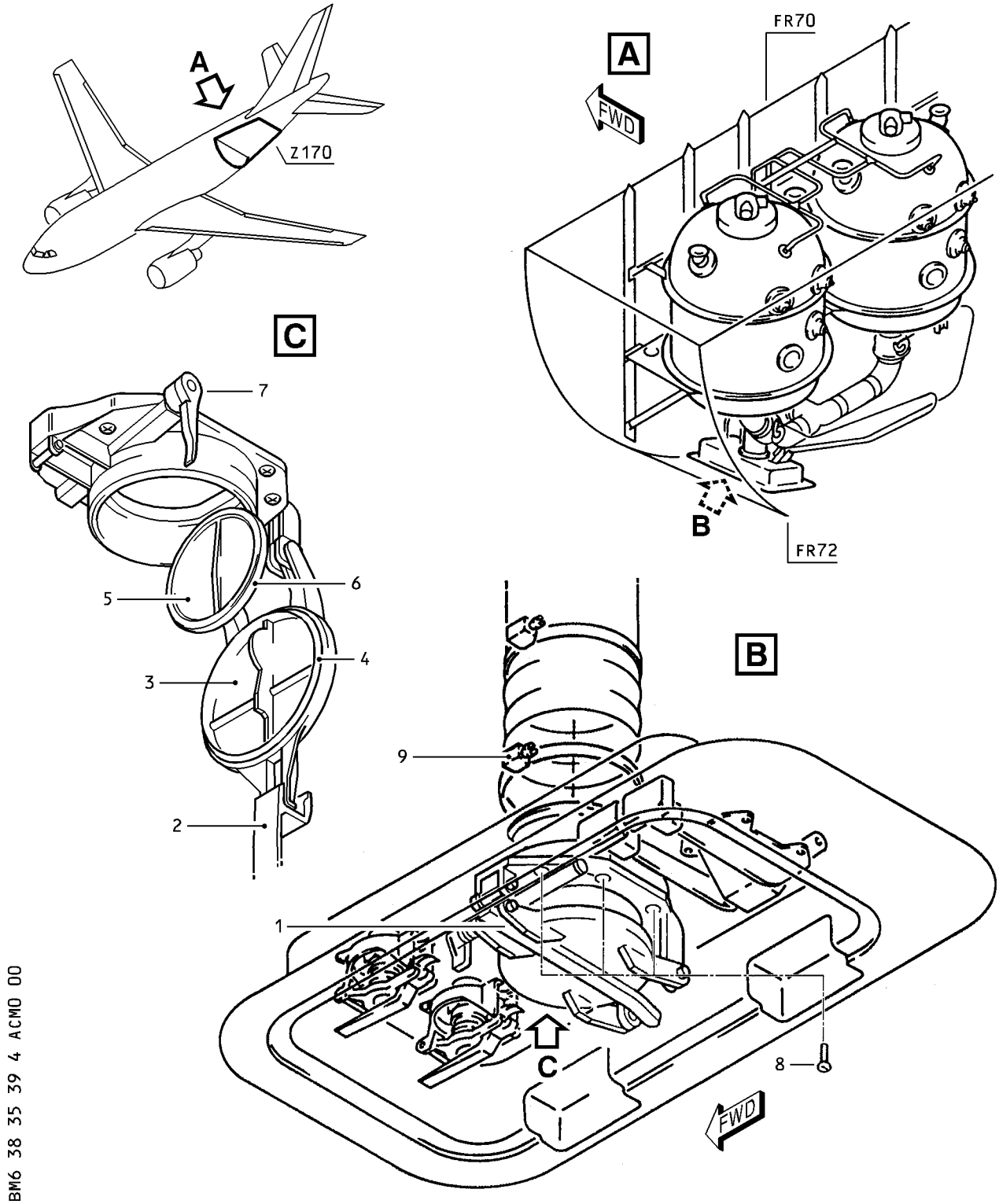
**ON A/C ALL



BM6 38 35 39 4 AAMO 01

Drain and Cap Assy
Figure 401

R



Drain and Cap Assy
Figure 402

D. Installation (Ref. Fig. 401)

R **ON A/C 001-100, 103-103, 106-106,

R Post SB 38-2026 For A/C 001-100,103-103,106-106,

D. Installation (Ref. Fig. 402)

**ON A/C ALL

(1)Position drain and cap assy (1).
(2)Apply corrosion-preventive paste (Mat. No. 05-002) to countersunk screws (2).
(3)Install countersunk screws (2).
(4)Install new cover seal (5) onto cap (4).
(5)Close cap (4).
(6)Install clamp (3).

R **ON A/C 001-100, 103-103, 106-106,

R Post SB 38-2026 For A/C 001-100,103-103,106-106,

(1)Put the drain and cap assy (1) in position.
(2)Apply corrosion-preventive paste (Mat. No. 05-002) to the screws (8).
(3)Install the screws (8).
(4)Install the new O-ring (6) on the inner flap (5).
(5)Install the new O-ring (4) on the outer cap (3).
(6)Close and lock the outer cap (3) with the locking handle (2).
NOTE : This will also close and lock the inner flap (5).
(7)Install the clamp (9).

**ON A/C ALL

E. Test
(1)Drain and flush waste tanks (Ref. 12-16-38-, P. Block 1).
NOTE : Do not prime waste tanks at this stage.
(2)Check hose connection of drain and cap assy for leakage.
NOTE : Leakage is not permissible.

F. Close-Up
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Close access door (162AZ).
(3)Close BULK cargo compartment door (Z813).
(4)Remove warning notice from waste system dump valve control levers.
(5)Prime waste tanks (Ref. 12-16-38, P. Block 1).
(6)Close access door (171BL).
(7)Remove access platforms.

AIR SUPPLY - DESCRIPTION AND OPERATION

1. General

For an effective distribution, the potable water system is pressurized with an air pressure of 22 - 25 psi (1.52 - 1.72 bar).
Compressed air is obtained from the following pneumatic system sources to meet the pressurization requirements:
- Engine Bleed Air
- Auxiliary Power Unit (APU)
- Ground Compressed Air Supply Unit.

To compensate any drop of pressure in the water tank(s) an auxiliary air compressor (21MD) is installed. The compressor is activated by pressure switch (22MD).
Air pressure is indicated via pressure transmitter (20MA) on two pressure gages. One pressure gage (21MA) is installed on potable water service panel and the other on combi gage (22MA) at purser's panel (863VU).

2. Component Location

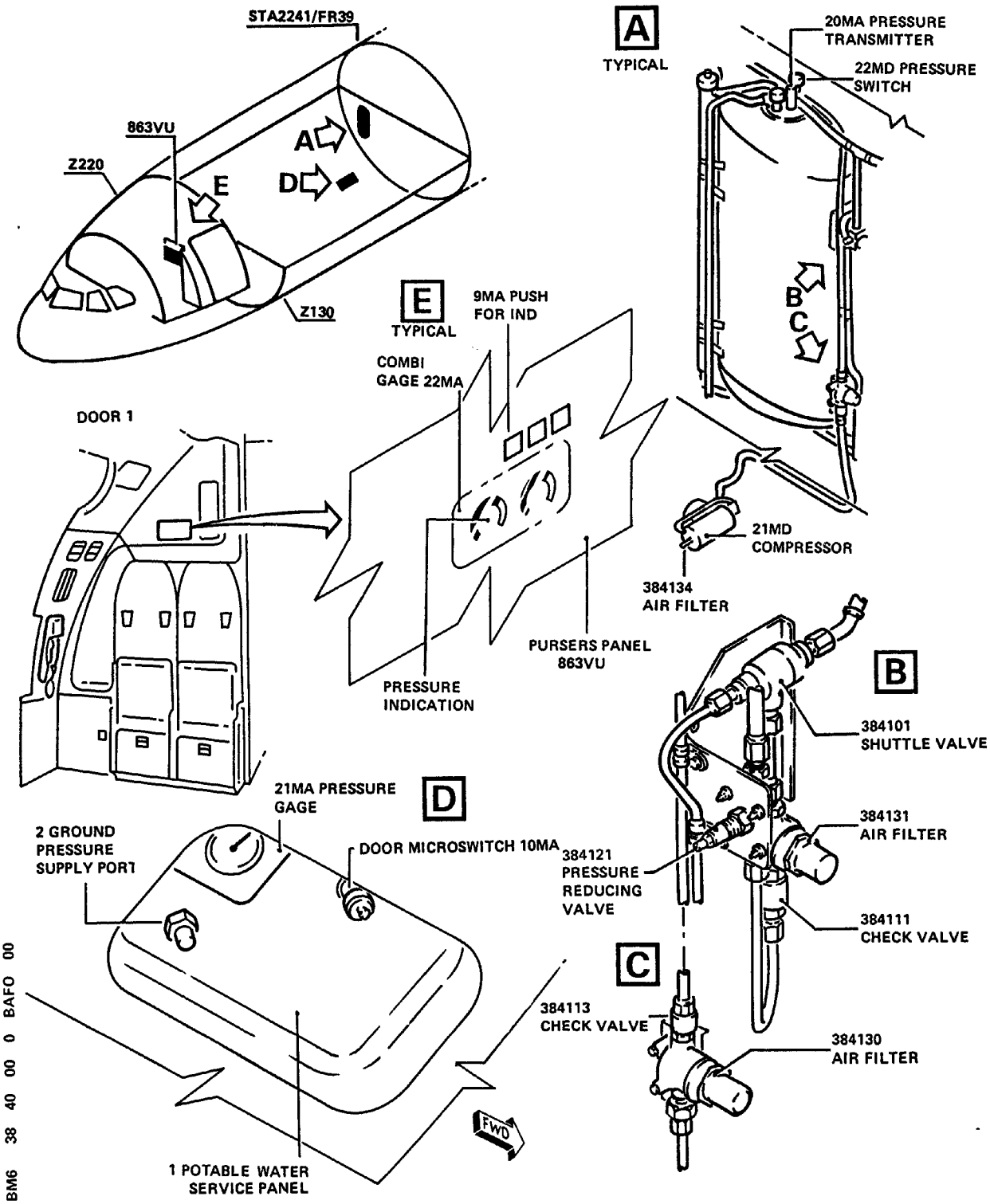
(Ref. Fig. 001)

FIN	FUNCTIONAL DESIGNATION	PANEL	ZONE	ACCESS DOOR	ATA REF.
9MA	PUSHBUTTON - PUSH FOR IND	863VU	221		
10MA	SWITCH - DOOR MICRO		136	136BR	38-42-13
20MA	TRANSMITTER - PRESSURE		138		38-42-11
21MA	GAGE - PRESSURE		136	136BR	38-42-12
22MA	GAGE - COMBI	863VU	221		38-13-12
21MD	COMPRESSOR - AIR		132		38-41-15
22MD	SWITCH - PRESSURE		138		38-41-17
384101	VALVE - SHUTTLE		138		38-41-11
384111	VALVE - CHECK		138		38-41-14
384113	VALVE - CHECK		138		38-41-14
384121	VALVE - PRESSURE REDUCING/RELIEF		138		38-41-13
384130	FILTER - AIR		138		38-41-12
384131	FILTER - AIR		138		38-41-12
384134	FILTER - AIR		138		38-41-15
1	PANEL - POTABLE WATER SERVICE		136	136BR	
2	PORT - GROUND PRESSURE SUPPLY		136	136BR	

3. Description

The pressurized air supply system includes the following components:

A. On Purser's Panel (863VU)
- A pressure indicator on combi gage (22MA)
- A pushbutton switch PUSH FOR IND (9MA)



Component Location
Figure 001

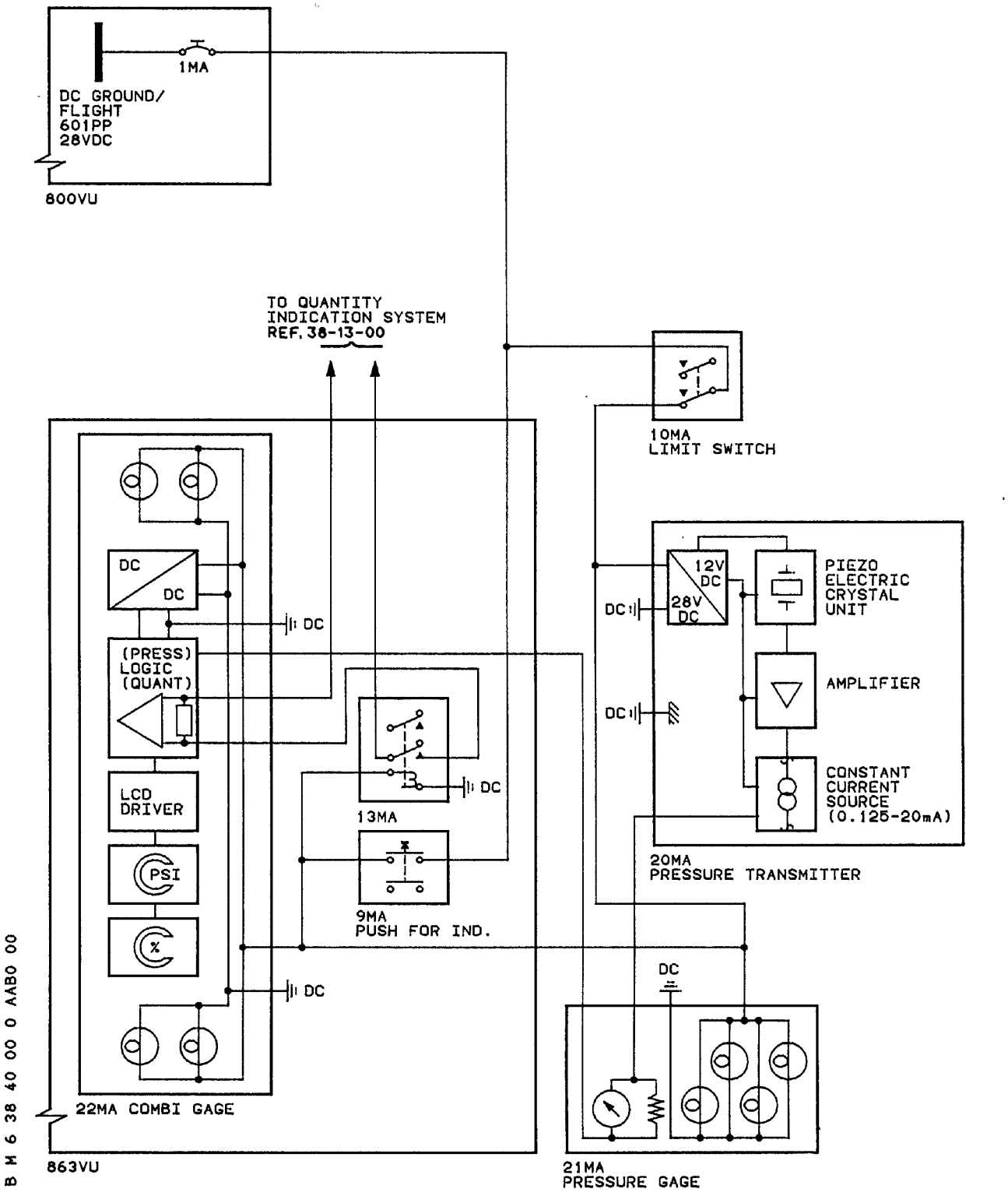
B. On Main Water Tank
- A shuttle valve
- Three air filters
- Two check valves
- A pressure switch (22MD)
- A combined pressure reducing/relief valve
- A pressure transmitter (20MA)

C. On Potable Water Service Panel
- A pressure gage (21MA)
- A door microswitch (10MA)
- A ground pressure supply port for ground servicing

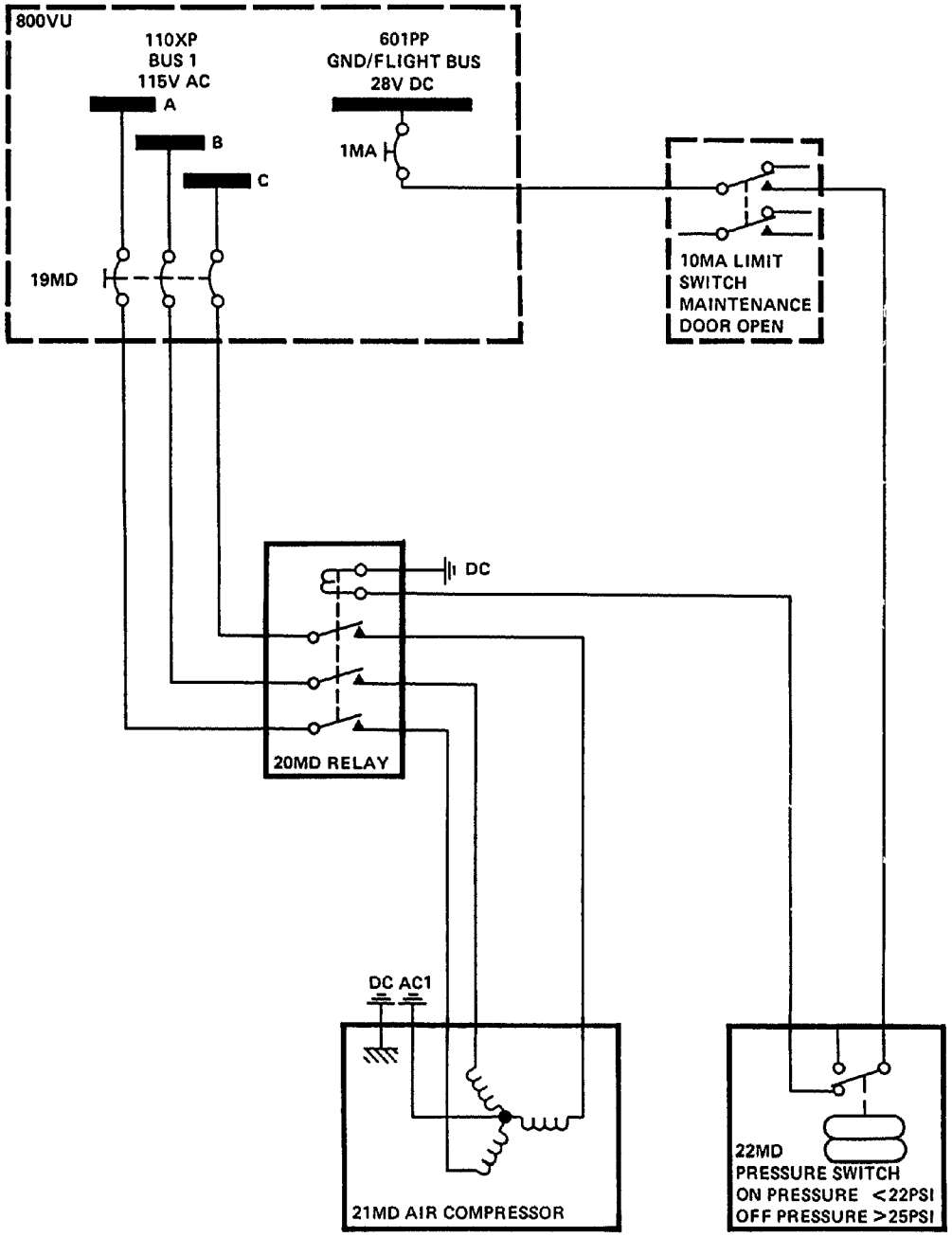
D. In Zone 132 between FR 38.1-38.2, STG 49
- Air Compressor (21MD)

4. Operation

(Ref. Fig. 002)
(Ref. Fig. 003)
The compressed air, except auxiliary compressor source, flows via shuttle valve, air filter, check valve and pressure reducing/relief valve to the water tank(s).
The auxiliary compressor (21MD) supplies the water tank(s) with compressed air via a filter and a check valve.
The shuttle valve directs pressurized air, either from the bleed air cross-feed line or from the ground compressed air supply line, to the air filter.
Any impurities in the compressed air are filtered by the air filter.
The pressure reducing/relief valve reduces the pressure from 44 psi (3.0 bar) to system working pressure of 22 - 25 psi (1.52 - 1.72 bar).
The pressure relief valve opens when system pressure exceeds 34 ±2 psi (2.35 ±0.14 bar) and reseats at a pressure of 30 psi (2.07 bar).
A check valve, installed between the air filter and pressure reducing/relief valve prevents water tank air pressure from bleeding back into the charging system.
The auxiliary compessor (21MD) is activated by pressure switch (22MD) when pressure in the water tank(s) drops below 22 psi (1.5 bar) and deactivates it when pressure reaches 25 psi (1.72 bar).
In flight, air pressure is indicated on the purser's panel (863VU) by combi gage (22MA) when pushbutton switch PUSH FOR IND (9MA) is pressed.
On ground, with power supply on and potable water service panel access door (136BR) open, air pressure is indicated on both purser's and service panel pressure gages (22MA, 21MA).



Electrical Schematic
Figure 002



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Electrical Schematic
Figure 003

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 1m (3ft)
B.	Air Supply Cart
C.	Electrical Ground Power Unit, 3-Phase, 115/200 V, 400 Hz
D.	Circuit Breaker Safety Clip and Tag
Referenced Procedures	
- 12-15-38, P. Block 1	Replenishing Potable Water
- 24-41-00, P. Block 301	AC External Power Control
- 36-11-00, P. Block 1	Engine Bleed Air Supply System
- 49-00-00, P. Block 501	Airborne Auxiliary Power
- 71-00-00, P. Block 501	Power Plant

2. Procedure

A. Job Set-Up
(1)Connect electrical ground power unit and engergize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(2)Make certain that electronics racks ventilation is correct.
(3)If required, replenish potable water system (Ref. 12-15-38, P. Block 1).
(4)Make certain that the following circuit breaker is closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5

(5)Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2

B. Pressurize Air Supply System
(1)Using Engines/APU
(a)Start engines (Ref. 71-00-00, P. Block 501) or APU (Ref. 49-00-00, P. Block 501).
(b)Select bleed air controls to required positions (Ref. 36-11-00, P. Block 1).

R NOTE : There are 3 types of pressure reducing valves, the PAS 129-155,
R the HTE510010, and the HTE510010-1, which are fully
R interchangable.

R NOTE : The potable water system is automatically pressurized via the
R bleed air system, either by the APU or by the engines. The bleed
R air pressure of 44 psi (3.0 bar) is reduced by the pressure
R reducing valve to a system working pressure of 22-26 psi
R (1.52-1.79 bar) for PAS 129-155 and 23-27 psi (1.59-1.86 bar)

R for HTE510010 and HTE510010-1. Excessive pressure is relieved
R via pressure reducing valve.
R (c)When a working pressure of 22-26 psi (1.52-1.79 bar) for PAS 129-155
R or 23-27 psi (1.59-1.86 bar) for HTE510010 and HTE510010-1 is attained
R switch off engines (Ref. 71-00-00, P. Block 501) or APU
(Ref. 49-00-00, P. Block 501).

(2)Using Air Supply Cart
(a)Position access platform and open potable water service panel access door (136BR).
(b)Remove dust cap from pressure port and connect supply cart.
(c)Start supply cart and pressurize potable water system to 25 psi (1.72 bar).
(d)When system pressure is reached, switch off and disconnect supply cart.
(e)Install dust cap to pressure port and close potable water service panel access door (136BR).
(f)Remove access platform.

(3)Using Compressor
(a)Make certain that potable water service panel access door (136BR) is closed.
(b)Remove safety clip and tag and close circuit breaker 19MD and check that compressor is operating.
R NOTE : Pressure stabilizes at 22-26 psi (1.52-1.79 bar) for PAS
R 129-155 and at 23-27 psi (1.59-1.86 bar) for HTE510010 and
R HTE510010-1 and then, the compressor ceases to operate.
R (c)When a working pressure of 22-26 psi (1.52-1.79 bar) for PAS129-155 and
R 23-27 psi (1.59-1.86 bar) for HTE510010 and HTE510010-1 has been attained, open and safety circuit breaker 19MD.

C. Check Air Pressure
(1)Check pressure indication by pressing pushbutton PUSH FOR IND (9MA) on purser's panel (863VU).
R NOTE : Pressure should be stabilized between 22-26 psi (1.52-1.79 bar)
R for PAS 129-155 and 23-27 psi (1.59-1.86 bar) for HTE510010
R and HTE510010-1.

D. Depressurize Air Supply System
(1)Position access platform and open potable water service panel access door (136BR).
(2)Make certain that cap is tight on fill/drain port.
(3)Turn and pull fill/overflow and drain valve control handle from NORMAL to FILL.
NOTE : System pressure will escape via overflow port.
(4)When water system is depressurized turn fill/overflow and drain valve from FILL to NORMAL position.
(5)Remove cap from fill/drain port and allow remaining water to drain.
(6)Install cap to fill/drain port and close potable water service panel access door (136BR).
(7)Remove access platform.

E. Close-Up
(1)Make certain that working area is clean and clear of tools and micellaneous items of equipment.
(2)De-energize the aircraft electrical network and disconnect ground power unit (Ref. 24-41-00, P. Block 301).
(3)Remove safety clip and tag and close circuit breaker 19MD.

1. Functional Test of System

A. Equipment and Materials

ITEM	DESIGNATION
1.	Calibrated Container, Capacity 0.5 l (0.13 US gal.)
2.	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz
3.	Circuit Breaker Safety Clip and Tag
4.	Access Platform 1 m (3 ft.)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 38-40-00, P. Block 301	Air Supply

B. Procedure

(1)Job Set-Up

(a)Position access platform under potable water service panel access door (136BR).

(b)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).

(c)Make certain that electronics racks ventilation is correct.

(d)Make certain that the following circuit breaker is closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5

(e)Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2

(f)If required, replenish potable water system (Ref. 12-15-38, P. Block 1).

(g)Pressurize potable water system (Ref. 38-40-00, P. Block 301).

(2)Test

ACTION	RESULT
1. On potable water service panel: - Open potable water service panel access door (136BR)	On potable water service panel: - Dial light in pressure gage (21MA) comes on. - Pressure gage (21MA) indicates approx. 25 psi (1.72 bar). NOTE : When pressure is incorrect, turn slot of pressure reducing adjuster on body of the water pressure reducing and relief valve until reading is 25 psi (1.72 bar). NOTE : For adjustment of the pressure reducing valve a pressure of 44 psi (3.03 bar) max. at the valve inlet is required. On purser's panel (863VU): - Background lighting in combi gage (22MA) comes on and a pressure of approx. 25 psi (1.72 bar) is indicated.
2. On potable water service panel: - Press and hold microswitch (10MA). NOTE: This action simulates closed potable water service panel access door (136BR).	On potable water service panel: - Dial light in pressure gage (21MA) goes off. - Pressure gage (21MA) indicates 0 psi (0 bar). On purser's panel (863VU): - Background lighting in combi gage (22MA) goes off.
3. On potable water service panel: - Release microswitch (10MA) and close potable water service panel access door (136BR).	
4. On purser's panel (863VU): - Press and hold pushbutton PUSH FOR IND (9MA).	On purser's panel (863VU): - Background lighting in combi gage (22MA) comes on. - Combi gage (22MA) indicates a pressure of approx. 25 psi (1.72 bar).
- Release pushbutton PUSH FOR IND (9MA).	- Background lighting in combi gage (22MA) goes off.
5. In each lavatory: - Place calibrated container under water faucet and initiate a continuous water flow for a period of approx. 10 sec.	In each lavatory: - Water collected in container to be 0.22 l (0.058 US gal.) minimum.

(3)Close-Up
(a)De-pressurize air supply system (Ref. 38-40-00, P. Block 301) if necessary.
(b)Replenish potable water system (Ref. 12-15-38, P. Block 1) if necessary.
(c)De-energize aircraft electrical network and disconnect ground power unit (Ref. 24-41-00, P. Block 301).
(d)Remove safety clip and tag and close circuit breaker 19MD.
(e)Remove access platform.
(f)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

SHUTTLE VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, up to 2.30 m (7.50 ft.)
B.	Blanking Caps
C.	O-Ring
D. Material No. 05-001	Special Materials (Ref. 20-31-00)

Referenced Procedures

- 38-40-00, P. Block 301	Air Supply
- 38-40-00, P. Block 501	Air Supply
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
- 53-10-55, P. Block 401	FWD Cargo Compartment Fixed Partition

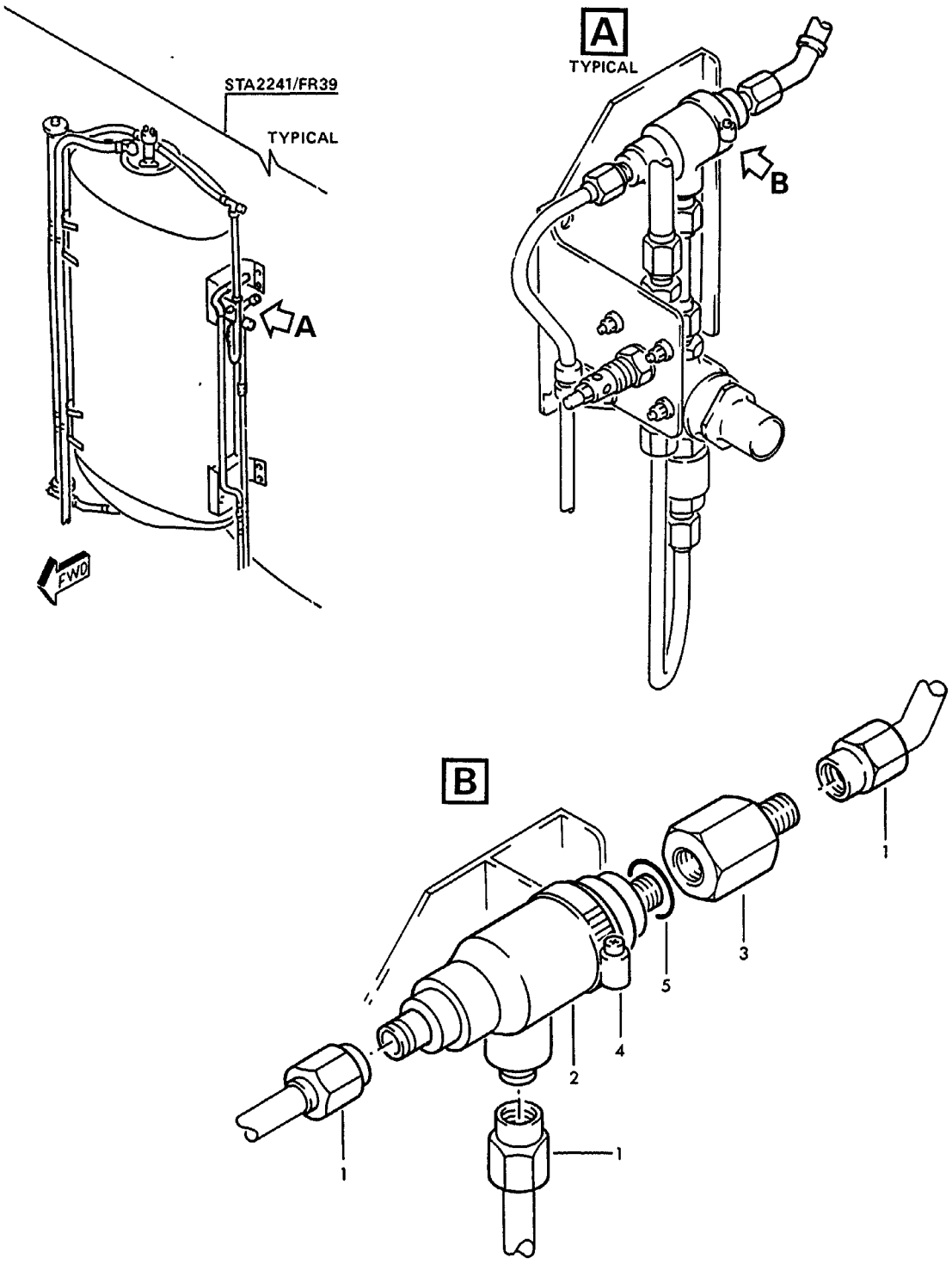
2. Procedure

A. Job Set-Up
(1)Position access platform under FWD cargo compartment door (Z811).
(2)Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-00, P. Block 301).
(3)Remove FWD cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).
(4)Depressurize air supply system (Ref. 38-40-00, P. Block 301).

B. Removal
(Ref. Fig. 401)
(1)Disconnect unions (1) from shuttle valve (2) and adapter (3).
(2)Release clamp (4) and remove shuttle valve (2).
(3)Remove adapter (3) from shuttle valve (2) and discard O-ring (5).
NOTE : Retain adapter for reinstallation.
(4)Fit blanking caps to hoses, shuttle valve and adapter.

C. Installation
(Ref. Fig. 401)
(1)Remove blanking caps from hoses, shuttle valve and adapter.
(2)Install adapter (3) with new O-ring (5) on shuttle valve (2).
NOTE : Apply grease (Mat. No. 05-001) to O-ring (5) prior to installation.
(3)Position shuttle valve (2) and secure with clamp (4).
(4)Connect unions (1) to shuttle valve (2) and adapter (3).

D. Test
(1)Carry out functional test of air supply system (Ref. 38-40-00, P. Block 501).
(2)Inspect shuttle valve connections and unions for leakage.
NOTE : Leakage is not permissible.



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Shuttle Valve
Figure 401

E. Close-Up
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Install FWD cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).
(3)Remove safety lock (Ref. 52-30-00, P. Block 301) and close FWD cargo compartment door (Z811).
(4)Remove access platform.

R 1. Reason for the Job

R A. Replace air supply filter element.

R 2. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.3 m (7.5 ft.)
B.	Blanking Caps
C.	Corrosion-Resistant Steel Lockwire, 0.6 mm (0.024 in.) dia.
D.	Torque Wrench, 0.85 m.daN (75 lbf.in.)
E.	Filter Element
F.	O-Rings
G.	Circuit Breaker Safety Clip and Tag
H. Material No. 05-001	Special Materials (Ref. 20-31-00)

Referenced Procedures

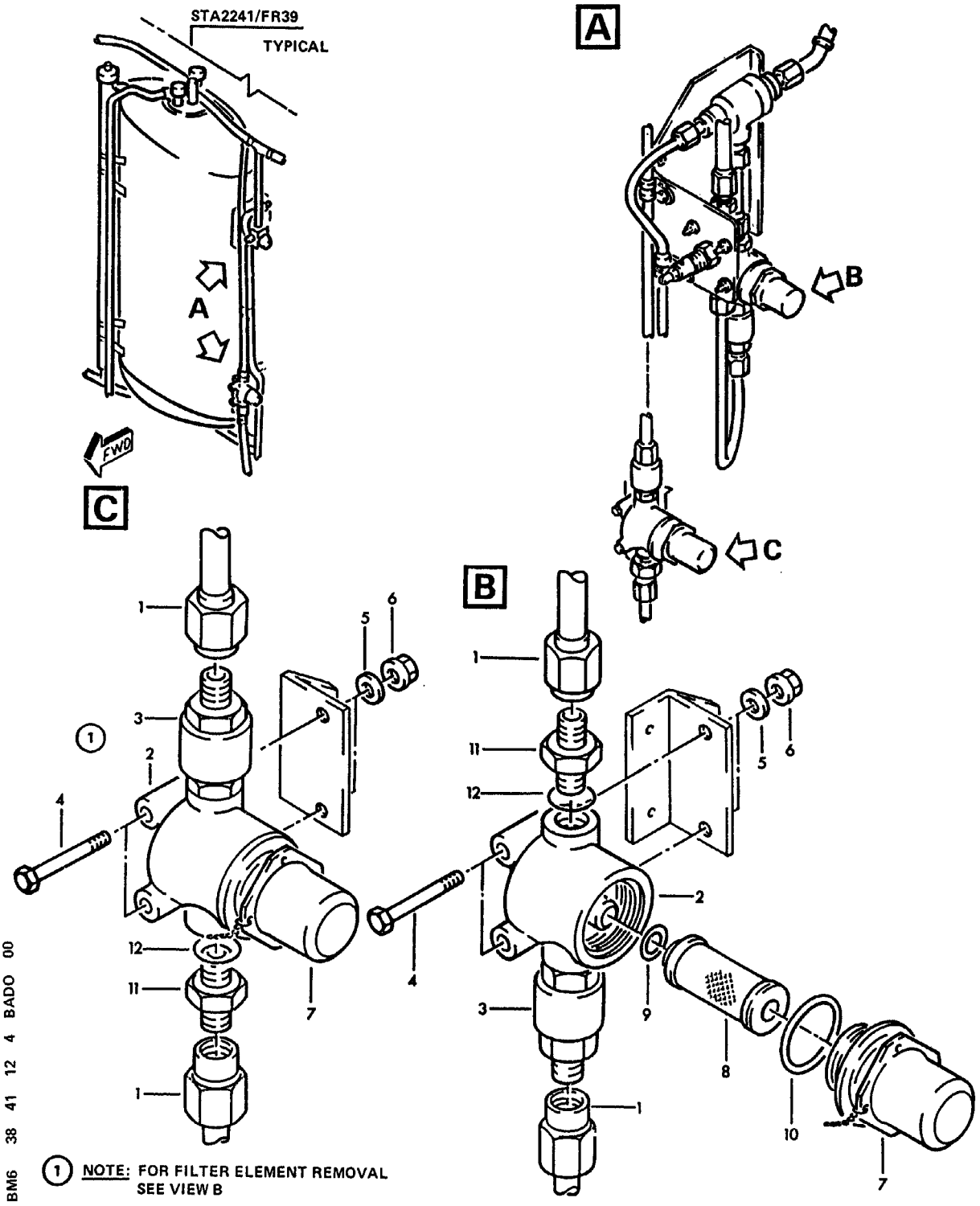
- 38-40-00, P. Block 301	Air Supply
- 38-41-14, P. Block 401	Check Valve
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
- 53-10-55, P. Block 401	FWD Cargo Compartment Fixed Partition

R 3. Procedure

A. Job Set-Up
(1)Position access platform under FWD cargo compartment door (Z811).
(2)Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-00, P. Block 301).
(3)Remove FWD cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).
(4)Depressurize air supply system, if necessary (Ref. 38-40-00, P. Block 301).
(5)Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2

B. Removal
(Ref. Fig. 401)
(1)Removal of Filter Assembly
(a)Disconnect unions (1) from adaptor (11) and check valve (3).
(b)If necessary, remove check valve (3) (Ref. 38-41-14, P. Block 401).
(c)If necessary, remove adaptor (11) and O-ring (12), discard O-ring.
(d)Remove filter assy (2) by removing bolts (4), washers (5) and nuts (6).
(e)Fit blanking caps to filter assy, check valve, adaptor and unions.



Air Filter
Figure 401

(2)Removal of Filter Element
NOTE : The following operations for changing the filter element are to be carried out under clean conditions.
(a)Remove lockwire and cover (7).
(b)Remove and discard filter element (8) and O-rings (9, 10).

C. Installation
(Ref. Fig. 401)
(1)Installation of Filter Assembly.
(a)Remove blanking caps from filter assy, check valve, adaptor and unions.
(b)Position filter assy (2) and install bolts (4), washers (5) and nuts (6).
(c)If removed, install adaptor (11) and new O-ring (12).
NOTE : Apply grease (Mat. No. 05-001) to O-ring (12) prior to installation.
(d)If removed, install check valve (3) (Ref. 38-41-14, P. Block 401).
(e)Connect unions (1) to adaptor (11) and check valve (3).
(2)Installation of Filter Element
(a)Install new O-rings (9, 10), new filter element (8) and cover (7).
NOTE : Apply grease (Mat. No. 05-001) to O-ring (10) prior to installation.
(b)TORQUE cover (7) to 0.85 m.daN (75 lbf.in.) and secure with lockwire 0.6 mm (0.024 in.) dia.

D. Test
(1)Pressurize potable water system (Ref. 38-40-00, P. Block 301).
(2)Inspect check valve connections and unions for leakage.
NOTE : Leakage is not permissible.

E. Close-Up
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Install FWD cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).
(3)Remove safety lock (Ref. 52-30-00, P. Block 301) and close FWD cargo compartment door (Z811).
(4)Remove access platform.
(5)Remove safety clip and tag and close circuit breaker 19MD.

PRESSURE REDUCING VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.3 m (7.5 ft.)
B.	Blanking Caps

Reference Procedures

- 38-40-00, P. Block 301	Air Supply
- 38-40-00, P. Block 501	Air Supply
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
- 53-10-55, P. Block 401	FWD Cargo Compartment Fixed Partition

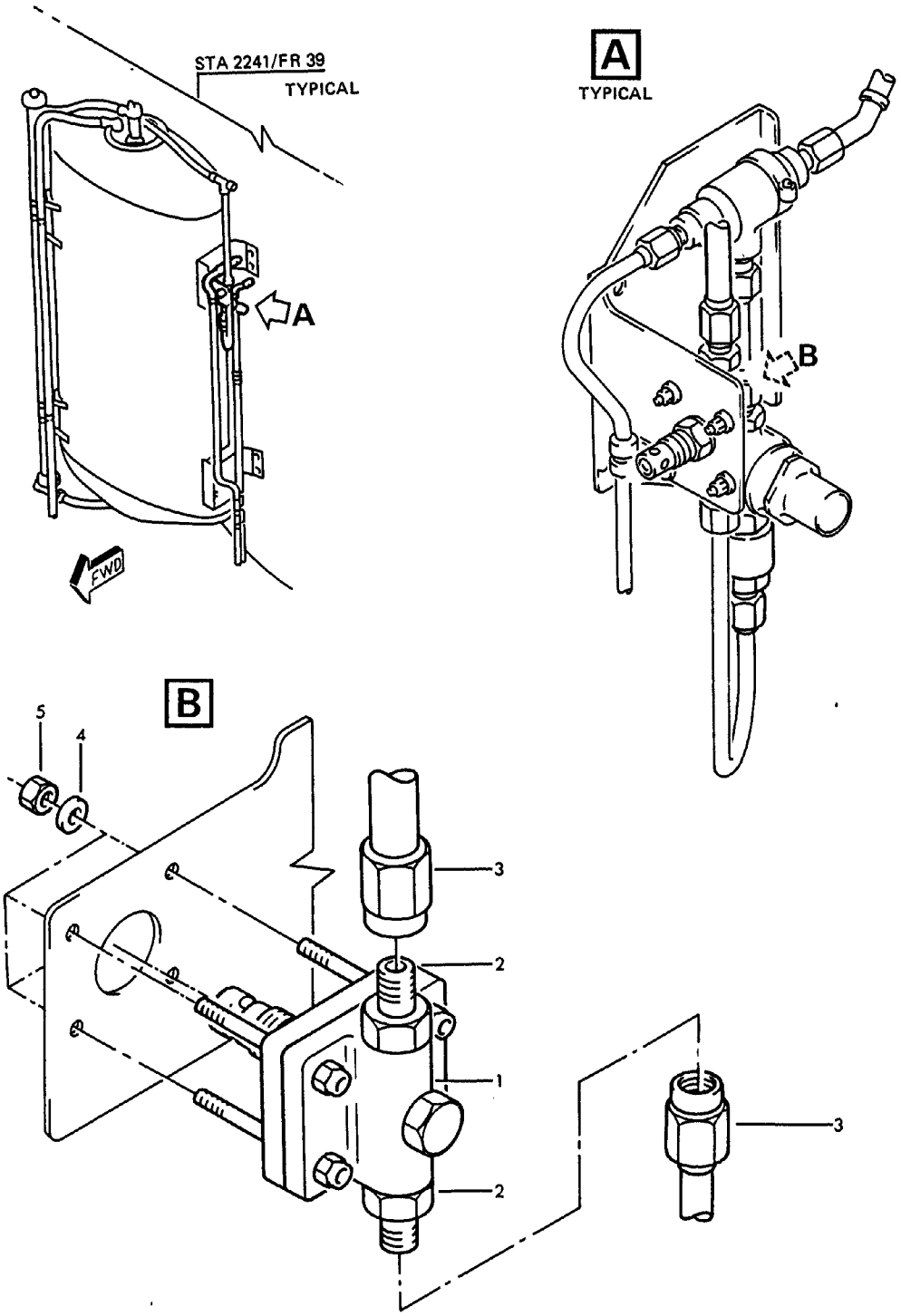
2. Procedure

A. Job Set-Up
(1)Position access platform under FWD cargo compartment door (Z811).
(2)Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-00, P. Block 301).
(3)Remove FWD cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).
(4)Depressurize air supply system (Ref. 38-40-00, P. Block 301).

B. Removal
(Ref. Fig. 401)
(1)Disconnect unions (3) from adaptors (2) of pressure reducing valve (1).
(2)Remove nuts (5), washers (4) and pressure reducing valve (1).
(3)Fit blanking caps to pressure reducing valve and unions.

C. Installation
(Ref. Fig. 401)
(1)Remove blanking caps from pressure reducing valve and unions.
(2)Position pressure reducing valve (1) and secure with washers (4) and nuts (5).
(3)Connect unions (3) to adapters (2) of pressure reducing valve (1).

D. Tests
(1)Carry out functional test of air supply system (Ref. 38-40-00, P. Block 501).
(2)Inspect pipe connections and unions for leakage.
NOTE : Leakage is not permissible.



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Pressure Reducing Valve
Figure 401

E. Close-Up
(1)Maker certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Install FWD cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).
(3)Remove safety lock (Ref. 52-30-00, P. Block 301) and close FWD cargo compartment door (Z811).
(4)Remove access platform.

R PRESSURE REDUCING VALVE - ADJUSTMENT/TEST

1. Functional Test of Pressure Reducing Valve

A. Equipment and Materials

ITEM	DESIGNATION
1.	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz
2.	Circuit Breaker Safety Clip and Tag
3.	Access Platform 1 m (3 ft.)

Referenced Procedures

- 12-15-38, P. Block 1	Replenishing Potable Water
- 12-24-38, P. Block 1	Potable Water System - Draining
- 24-41-00, P. Block 301	AC External Power Control
- 38-40-00, P. Block 301	Air Supply

B. Procedure

(1)Job Set-Up

(a)Position access platform under potable water service panel access door (136BR).

(b)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).

(c)Make certain that electronics racks ventilation is correct.

(d)Make certain that the following circuit breaker is closed:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5

(e)Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2

(f)If required, replenish potable water system (Ref. 12-15-38, P. Block 1).

(g)Pressurize potable water system (Ref. 38-40-00, P. Block 301).

(2)Test

ACTION	RESULT
1. On potable water service panel: - Open potable water service panel access door (136BR).	On potable water service panel: - Dial light in pressure gage (21MA) comes on. - Pressure gage (21MA) indicates approx. 25 psi (1.72 bar). On purser's panel (863VU): - Dial light in pressure gage (22MA) comes on and a pressure of approx. 25 psi (1.72 bar) is indicated.
2. On potable water service panel: - Slowly increase the pressure at the ground air-supply cart to 44 psi (3.0336 bar).	In the potable water sytem: - The potable water system is pressurized. - The pressure reducing valve operates and stops the air supply to the water tanks. On purser's panel (863VU): - When the airflow to the tank stops, pressure gage (22MA) indicates approx. 25 psi (1.7236 bar). On potable water service panel: - When the airflow to the tank stops, pressure gage (21MA) indicates approx. 25 psi (1.7236 bar). NOTE : When pressure is incorrect replace pressure reducing valve (Ref. 38-41-13, P. Block 401). NOTE : Adjust pressure reducing valve off A/C refer the applicable CMM.

(3)Close-Up

(a)De-pressurize air supply system (Ref. 38-40-00, P. Block 301) if necessary.

(b)Replenish potable water system (Ref. 12-15-38, P. Block 1) if necessary.

(c)De-energize aircraft electrical network and disconnect ground power unit (Ref. 24-41-00, P. Block 301).

(d)Remove safety clip and tag and close circuit breaker 19MD.

(e)Remove access platform.

(f)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.

CHECK VALVE - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.3 m (7.5 ft.)
B.	O-Ring
C.	Blanking Caps
D.	Corrosion Resistant Steel Lockwire 0.6 mm (0.024 in.) dia.
E.	Circuit Breaker Safety Clip and Tag
F. Material No. 05.001	Special Materials (Ref. 20-31-00)

Referenced Procedures

- 38-40-00, P. Block 301	Air Supply
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
- 53-10-55, P. Block 401	FWD Cargo Compartment Fixed Partition

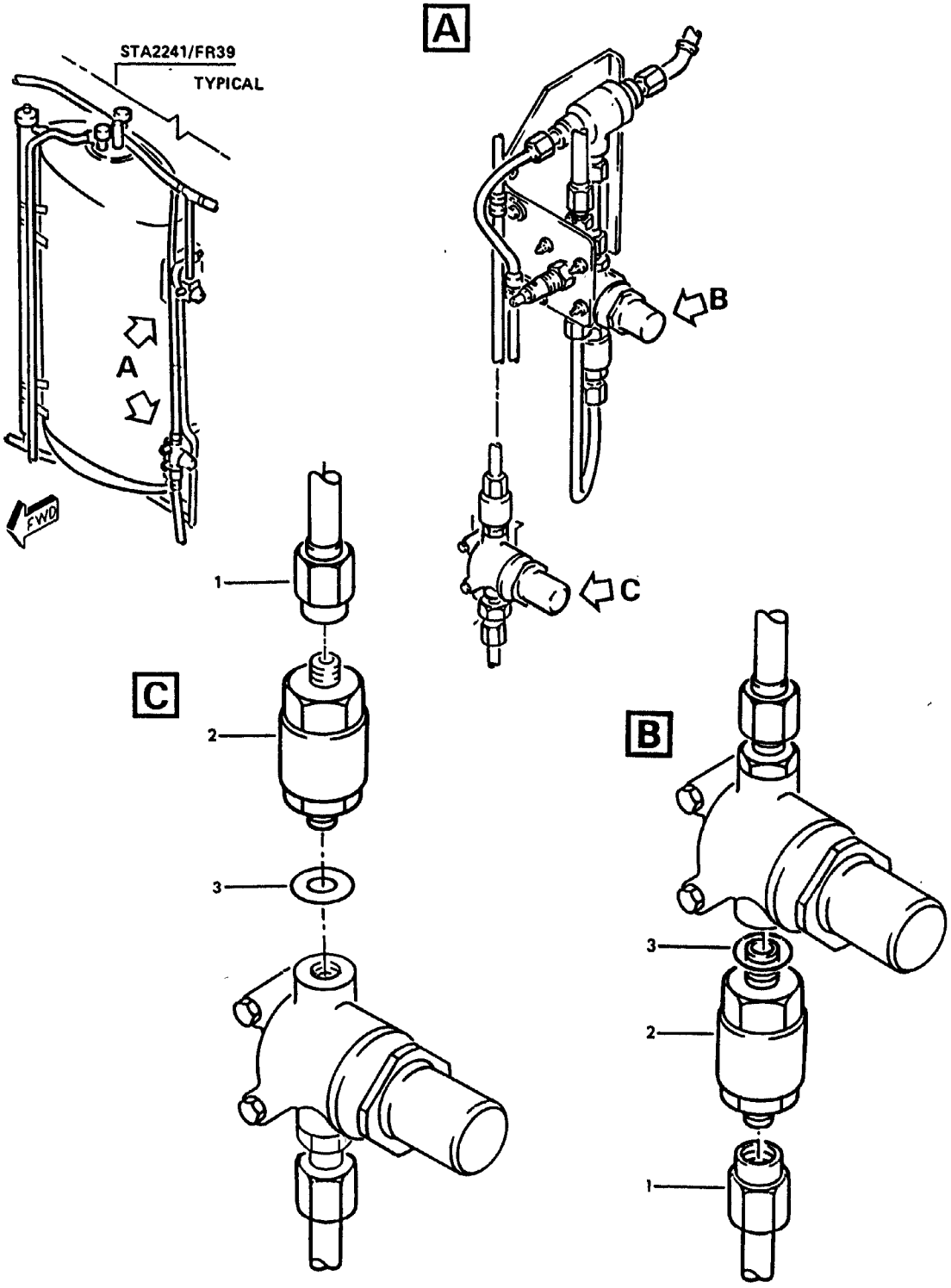
2. Procedure

A. Job Set-Up
(1)Position access platform under FWD cargo compartment door (Z811).
(2)Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-00, P. Block 301).
(3)Remove FWD cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).
(4)Depressurize air supply system, if necessary (Ref. 38-40-00, P. Block 301).
(5)Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2

B. Removal
(Ref. Fig. 401)
(1)Disconnect union (1) from check valve (2).
(2)Remove check valve (2) and O-ring (3).
NOTE : Discard O-ring.
(3)Fit blanking caps to all openings.

C. Installation
(Ref. Fig. 401)
(1)Remove blanking caps and install check valve (2) with new O-ring (3).
NOTE : Apply grease (Mat. No. 05-001) to O-ring prior to installation.
NOTE : Make certain that check valve arrow is in direction of flow.
(2)Secure check valve end fittings with lockwire 0.6 mm (0.024 in.) dia.
(3)Connect union (1) to check valve (2).



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Check Valve
Figure 401

D. Test
(1)Pressurize potable water system (Ref. 38-40-00, P. Block 301).
(2)Inspect check valve connections and unions for leakage.
NOTE : Leakage is not permissible.

E. Close-Up
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Install FWD cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).
(3)Remove safety lock (Ref. 52-30-00, P. Block 301) and close FWD cargo compartment door (Z811).
(4)Remove access platform.
(5)Remove safety clip and tag and close circuit breaker 19MD.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, up to 2.30 m (7.50 ft.)
B.	O-Rings
C.	Blanking Caps
D.	Circuit Breaker Safety Clip and Tag
E.	Electrical Ground Power Unit - 3-phase, 115/200 V, 400 Hz

Referenced Procedures

- 20-28-11, P. Block 1	Electrical Bonding
- 24-41-00, P. Block 301	AC External Power Control
- 38-40-00, P. Block 301	Air Supply
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors

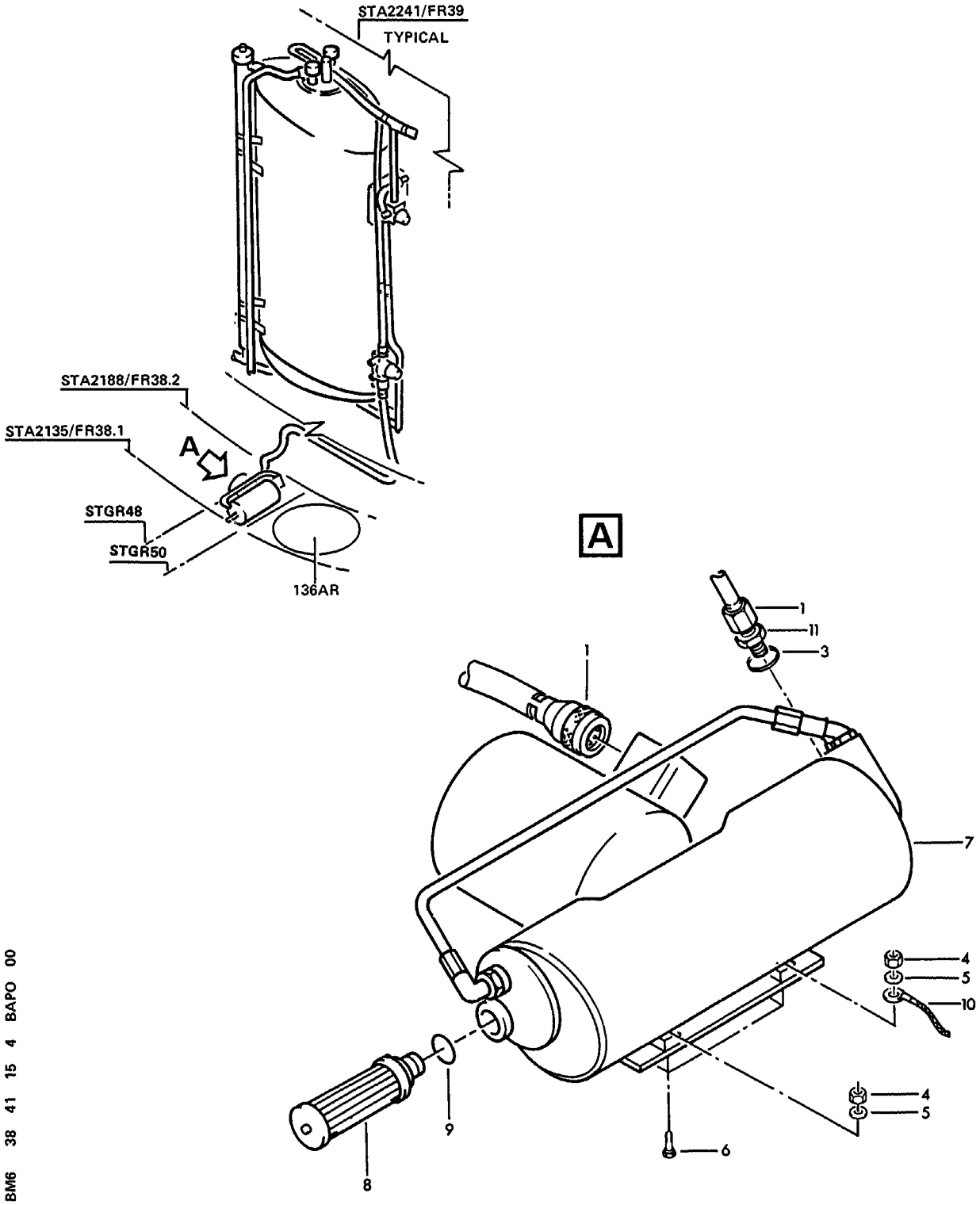
2. Procedure

A. Job Set-Up
(1)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(2)Make certain that electronics racks ventilation is correct.
(3)Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER COMPRESSOR	19MD	H2

(4)Position access platform and remove access panel (136AR).
(5)Depressurize air supply system (Ref. 38-40-00, P. Block 301).

B. Removal
(Ref. Fig. 401)
(1)Disconnect electrical connector (1).
(2)Disconnect union (2) from adapter (11).
(3)Remove adoptor (11) and O-ring (3), discard O-ring.
(4)Remove nuts (4), washers (5), bolts (6) and bonding strap (10).
(5)Remove compressor (7).
(6)Remove air filter (8) and O-ring (9) from compressor (7), discard O-ring.
(7)Install blanking caps to all openings.



Air Compressor - 21MD
Figure 401

C. Installation
(Ref. Fig. 401)
(1)Remove blanking caps from all openings.
(2)Install air filter (8) with new O-ring (9).
(3)Install compressor (7) and bonding strap (10) using bolts (6), washers (5) and nuts (4).
NOTE : For electrical bonding procedure, refer to 20-28-11, P. Block 1.
(4)Install adapter (11) with new O-ring (3).
(5)Connect union (2) to adaptor (11).
(6)Connect electrical connector (1).

D. Test
(1)Make certain that potable water service panel access door (136BR) is closed.
(2)Remove safety clip and tag and close circuit breaker 19MD.
(3)Ensure compressor is operating.
(4)Inspect pipe connections and unions for leakage.
NOTE : Leakage is not permissible.
(5)Inspect pressure gages for correct pressure.
NOTE : System working pressure is between 22-25 psi (1.52-1.72 bar).

E. Close-Up
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Install access panel (136AR) and remove access platform.
(3)De-energize the aircraft electrical network and disconnect electrical ground power unit (Ref. 24-41-00, P. Block 301).

PRESSURE SWITCH - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform, 2.3 m (7.5 ft.)
B.	Blanking Caps
C.	Circuit Breaker Safety Clips and Tags

Referenced Procedures

- 38-12-00, P. Block 501	Distribution
- 38-40-00, P. Block 301	Air Supply
- 38-40-00, P. Block 501	Air Supply
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
- 53-10-55, P. Block 401	FWD Cargo Compartment Fixed Partition

2. Procedure

A. Job Set-Up

(1)Open, safety and tag the following circuit breakers:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5
800VU	WATER COMPRESSOR	19MD	H2

(2)Position access platform under FWD cargo compartment door (Z811).

(3)Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-00, P. Block 301).

(4)Remove FWD cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).

(5)Depressurize air supply system (Ref. 38-40-00, P. Block 301).

B. Removal

(Ref. Fig. 401)

(Ref. Fig. 402)

(1)Disconnect electrical connector (4).

R (2)Disconnect union (2).

R (3)Remove pressure switch (1).

R (4)Put blanking caps on all openings.

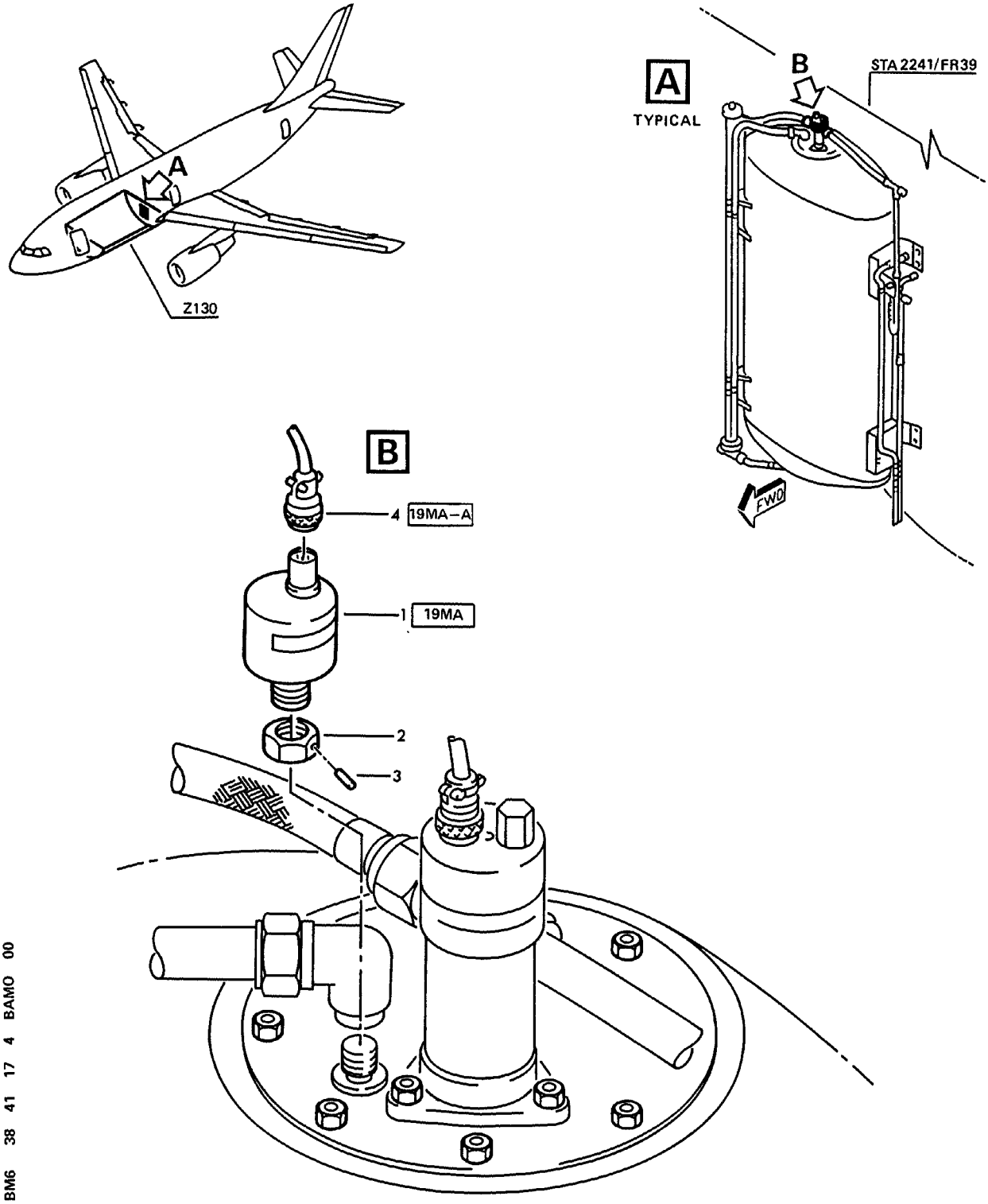
R C. Preparation for Installation

R NOTE : This step is only necessary if a replacement pressure switch without a union is to be installed.

R (1)Remove blanking cap from pressure switch (1).

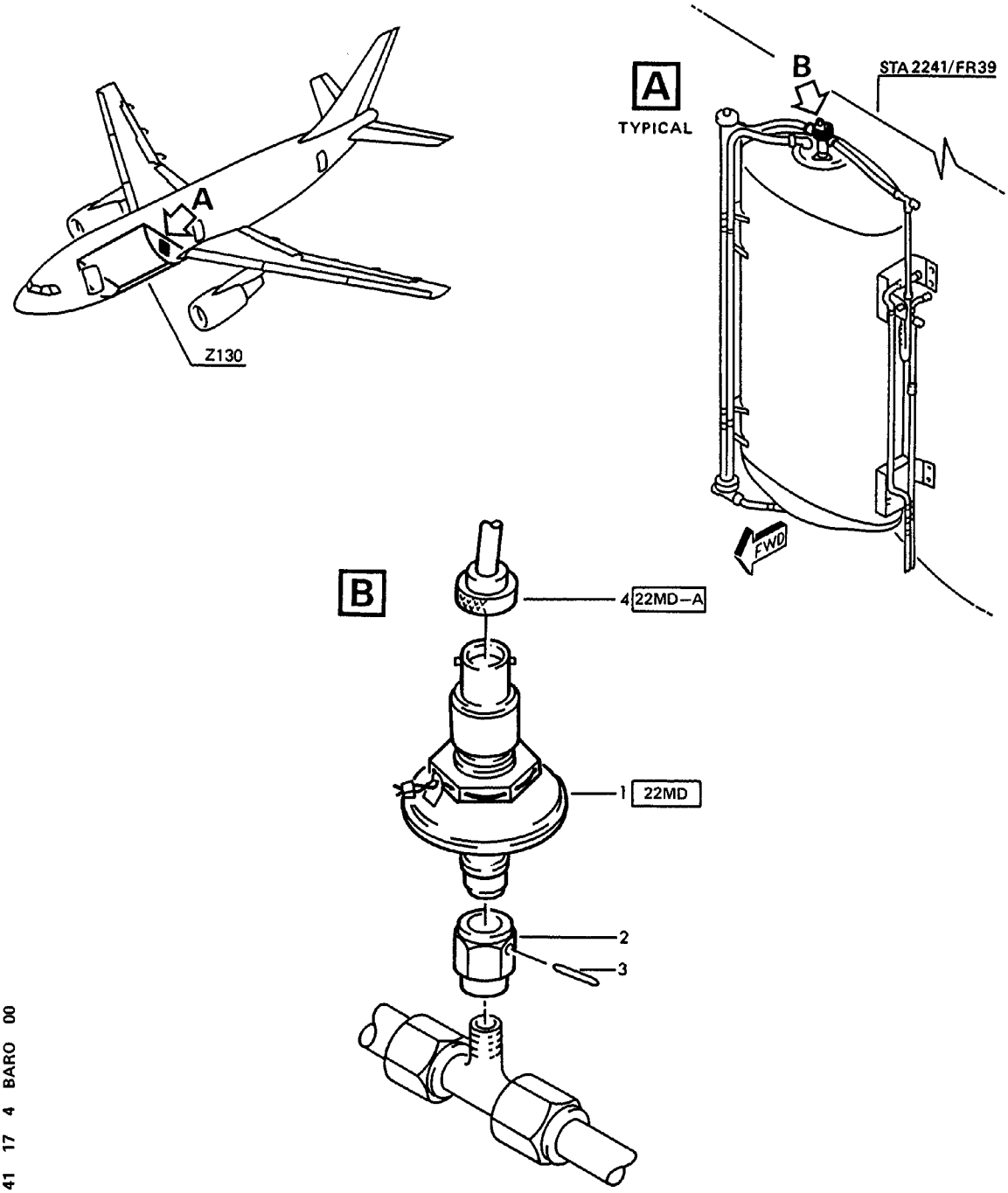
R (2)Put a new union (2) in position.

R (3)Secure union with a new pin (3).



BM6 38 41 17 4 BAMO 00

Pressure Switch - 19MA
Figure 401



BM6 38 41 17 4 BARO 00

Pressure Switch - 22MD
Figure 402

D. Installation
(1)Remove all blanking caps.
(2)Put pressure switch (1) in position.
(3)Connect union (2).
(4)Connect electrical connector (4).

E. Test
(1)Test pressure switches 19MA (Ref. 38-12-00, P. Block 501) and 22MD (Ref. 38-40-00, P. Block 501).
(2)Inspect pipe connections and unions for leakage.
NOTE : Leakage is not permissible.

F. Close-Up
(1)Remove safety clips and tags and close circuit breakers 1MA and 19MD.
(2)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(3)Install cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).
(4)Remove safety lock and close FWD cargo compartment door (Z811) (Ref. 52-30-00, P. Block 301) and remove access platform.

AIR PRESSURE TRANSMITTER - REMOVAL/INSTALLATION

1. Equipment and Materials

ITEM	DESIGNATION
A.	Access Platform
B.	O-Ring
C.	Blanking Caps
D.	Circuit Breaker Safety Clips and Tags

Referenced Procedures

- 38-40-00, P. Block 301	Air Supply
- 38-40-00, P. Block 501	Air Supply
- 52-30-00, P. Block 301	FWD and AFT Cargo Compartment Doors
- 53-10-55, P. Block 401	FWD Cargo Compartment Fixed Partition

2. Procedure

A. Job Set-Up

(1)Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5

(2)Position access platform under FWD cargo compartment door (Z811).

(3)Open FWD cargo compartment door (Z811) and secure with safety lock (Ref. 52-30-00, P. Block 301).

(4)Remove FWD cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).

(5)Depressurize air supply system (Ref. 38-40-00, P. Block 301).

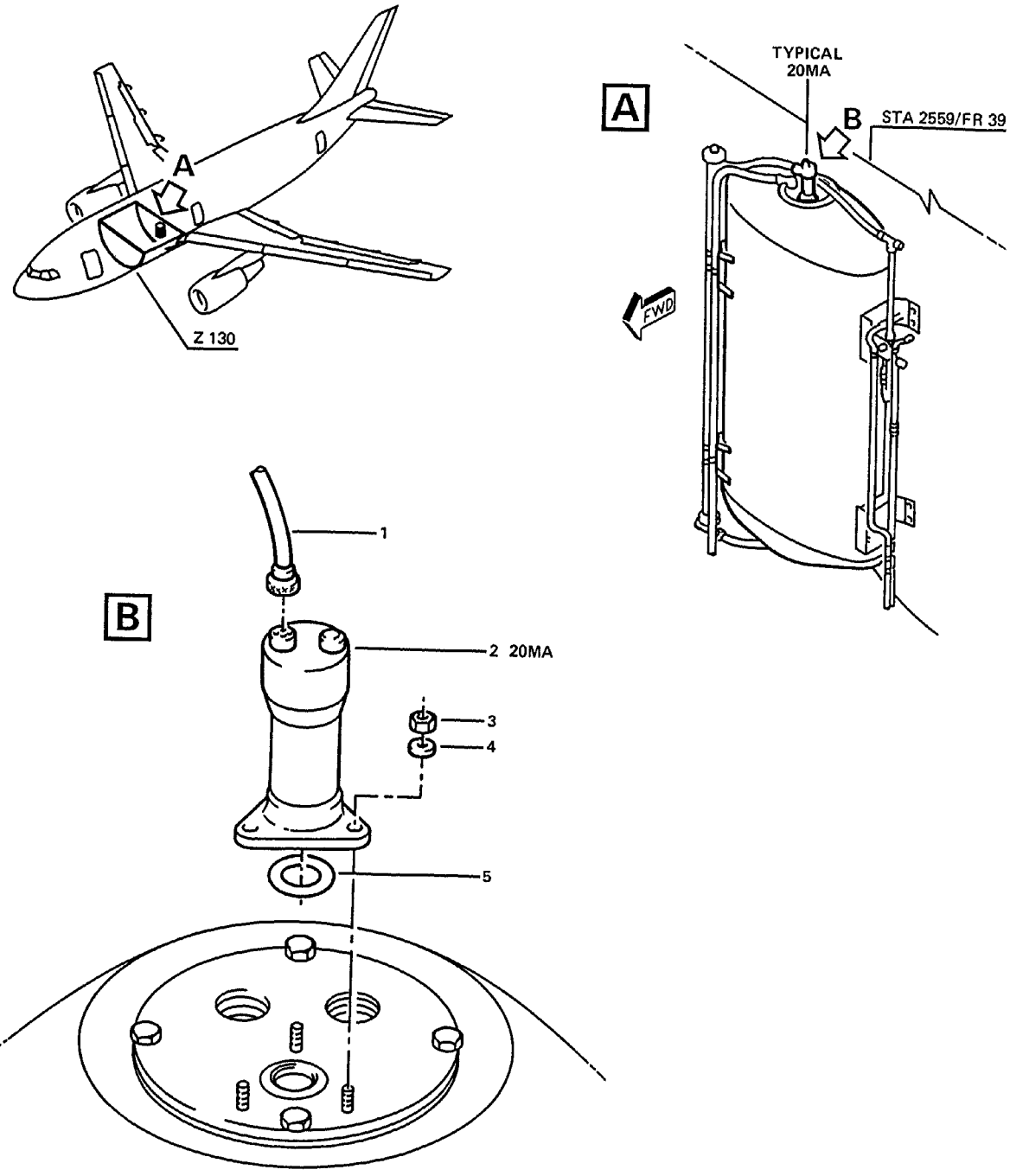
B. Removal
(Ref. Fig. 401)

(1)Disconnect electrical connector (1).
(2)Remove nuts (3) and washers (4).
(3)Remove transmitter 20MA (2) and discard O-ring (5).
(4)Blank off transmitter connection on tank.

C. Installation
(1)Remove blank from transmitter connection on tank.
(2)Position new O-ring (5).
(3)Install transmitter 20MA (2) and secure using washers (4) and nuts (3).
(4)Connect electrical connector (1).

D. Test
(1)Remove safety clips and tags and close circuit breaker 1MA.
(2)Carry out functional test of air supply system (Ref. 38-40-00, P. Block 501).
(3)Inspect transmitter connection and unions for leakage.
NOTE: Leakage is not permissible.

E. Close-Up
(1)Make certain that working area is clean and clear of tools and miscellaneous items of equipment.
(2)Install FWD cargo compartment fixed partition (131RW) (Ref. 53-10-55, P. Block 401).
(3)Remove safety lock (Ref. 52-30-00, P. Block 301) and close FWD cargo compartment door (Z811).
(4)Remove access platform.



BM6 38 42 11 4 BCMO 00

Air Pressure Transmitter - 20MA
Figure 401

AIR PRESSURE INDICATOR - REMOVAL/INSTALLATION

NOTE : The air pressure is indicated on combigage 22MA at the purser's panel 863VU and on pressure gage 21MA at the potable water service panel 910VU.
For removal/installation procedure of combigage 22MA refer to 38-13-12, P. Block 401.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Circuit Breaker Safety Clip and Tag
Referenced Procedure - 38-40-00, P. Block 501	Air Supply

2. Procedure

A. Job Set-Up
(1)Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5

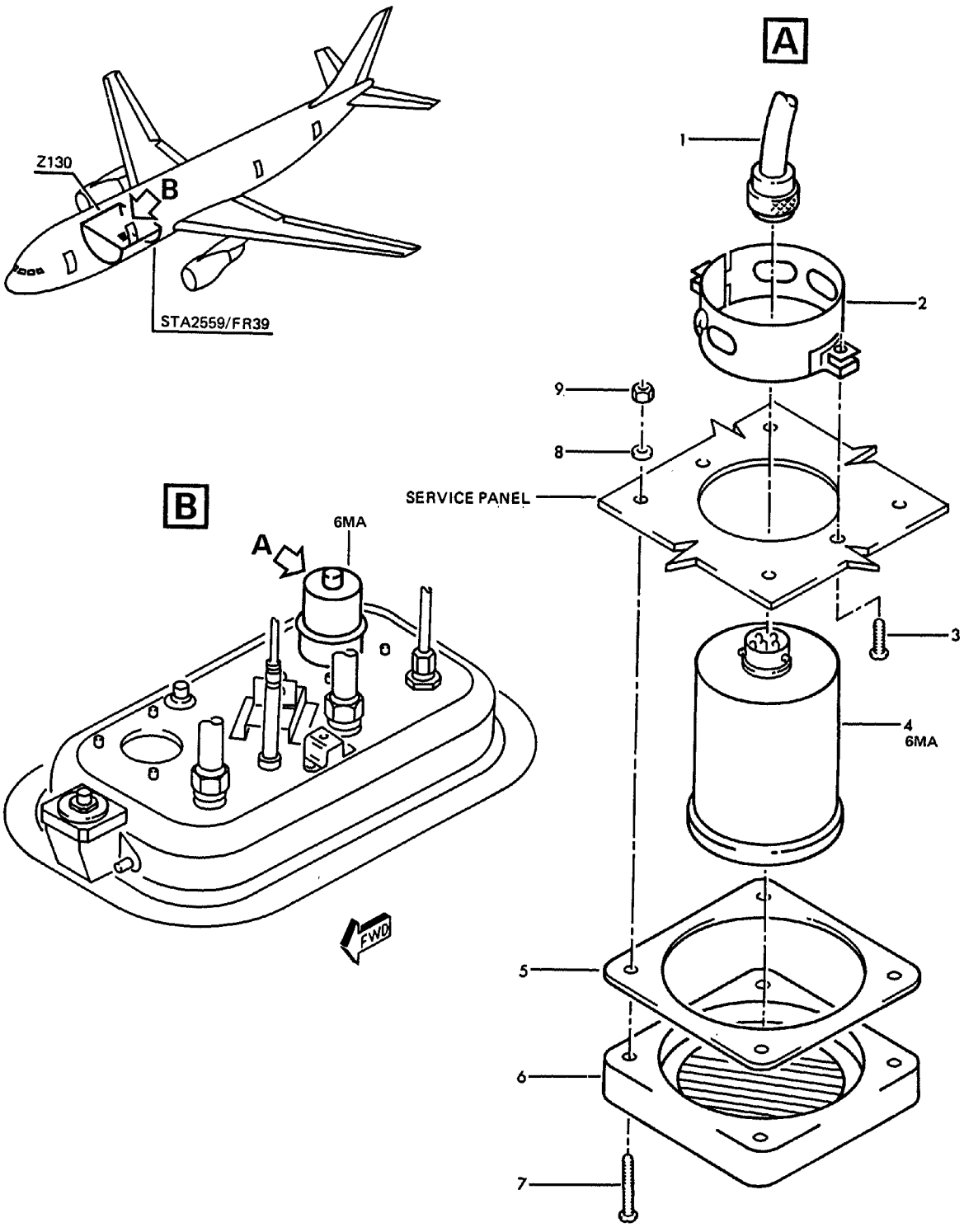
(2)Gain access to indicator 21MA.
(a)Open service panel 136BR.
(b)Remove access door 136AR.

B. Removal
(1)Air Pressure Indicator 21MA.
(Ref. Fig. 401)
(a)Disconnect electrical connector (1).
(b)Remove nuts (9), washers (8) and screws (7).
(c)Remove flange (6) and seal (5).
(d)Remove screws (3) and indicator (4) with clamp (2).

C. Installation

(1)Air Pressure Indicator 21MA.
(a)Position indicator (4) with clamp (2) and install screws (3).
(b)Position seal (5) with flange (6) and secure with screws (7), washers (8) and nuts (9).
(c)Connect electrical connector (1).

D. Test
(1)Remove safety clip and tag and close circuit breaker 1MA.
(2)Carry out functional test of air supply system (Ref. 38-40-00, P. Block 501).



Air Pressure Indicator 6MA
Figure 401

E. Close-Up
(1)Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.
(2)Close service panel 136BR and install access door 136AR.

1. Equipment and Materials

ITEM	DESIGNATION
A.	Continuity Tester
B.	Electrical Ground Power Unit - 3-Phase, 115/200 V, 400 Hz
C.	Circuit Breaker Safety Clips and Tags

Referenced Procedure

- 24-41-00, P. Block 301	AC External Power Control

2. Procedure

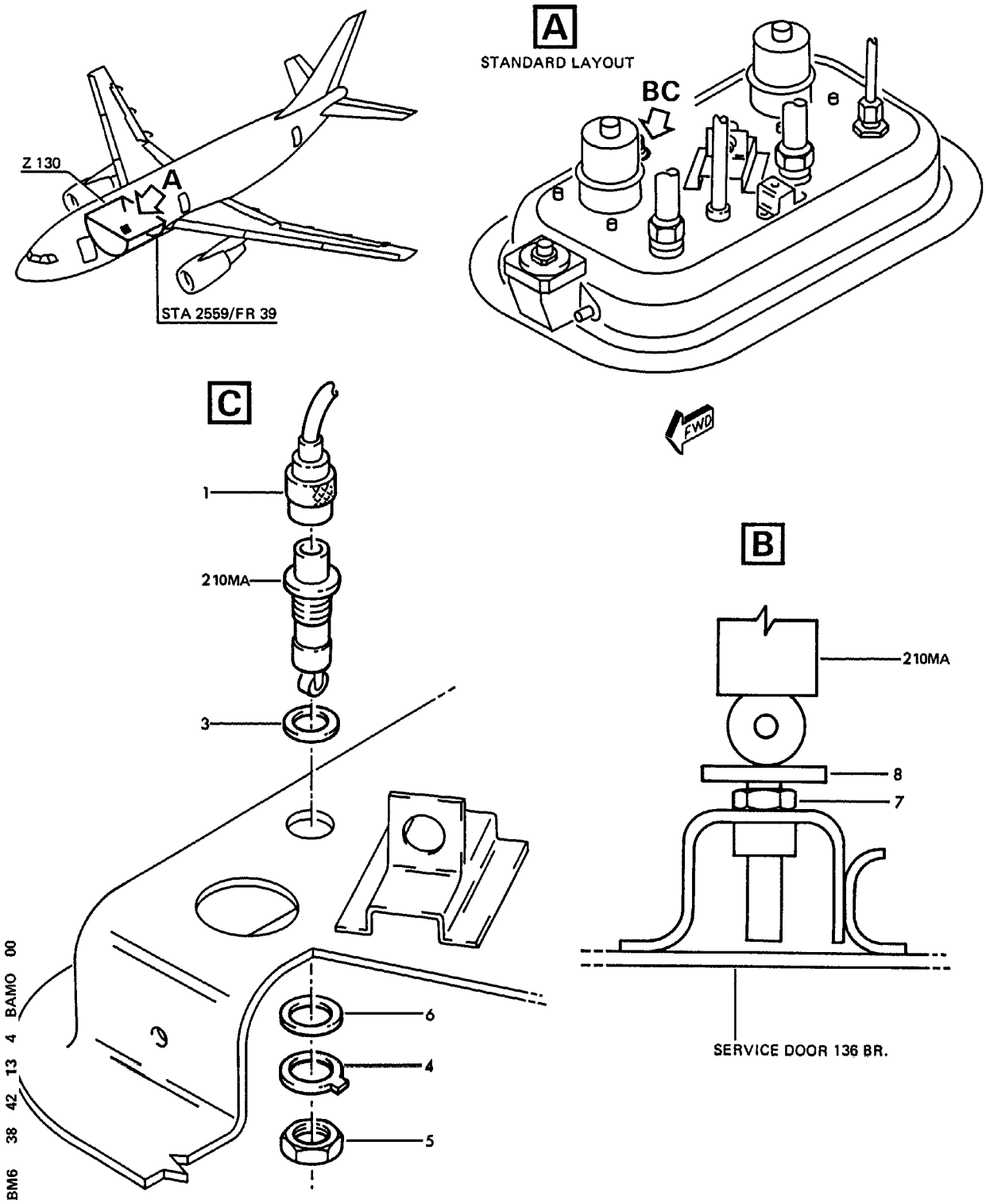
A. Job Set-Up
(1)Open, safety and tag the following circuit breaker:

PANEL	SERVICE	IDENT.	LOCATION
800VU	WATER SYSTEM	1MA	H5

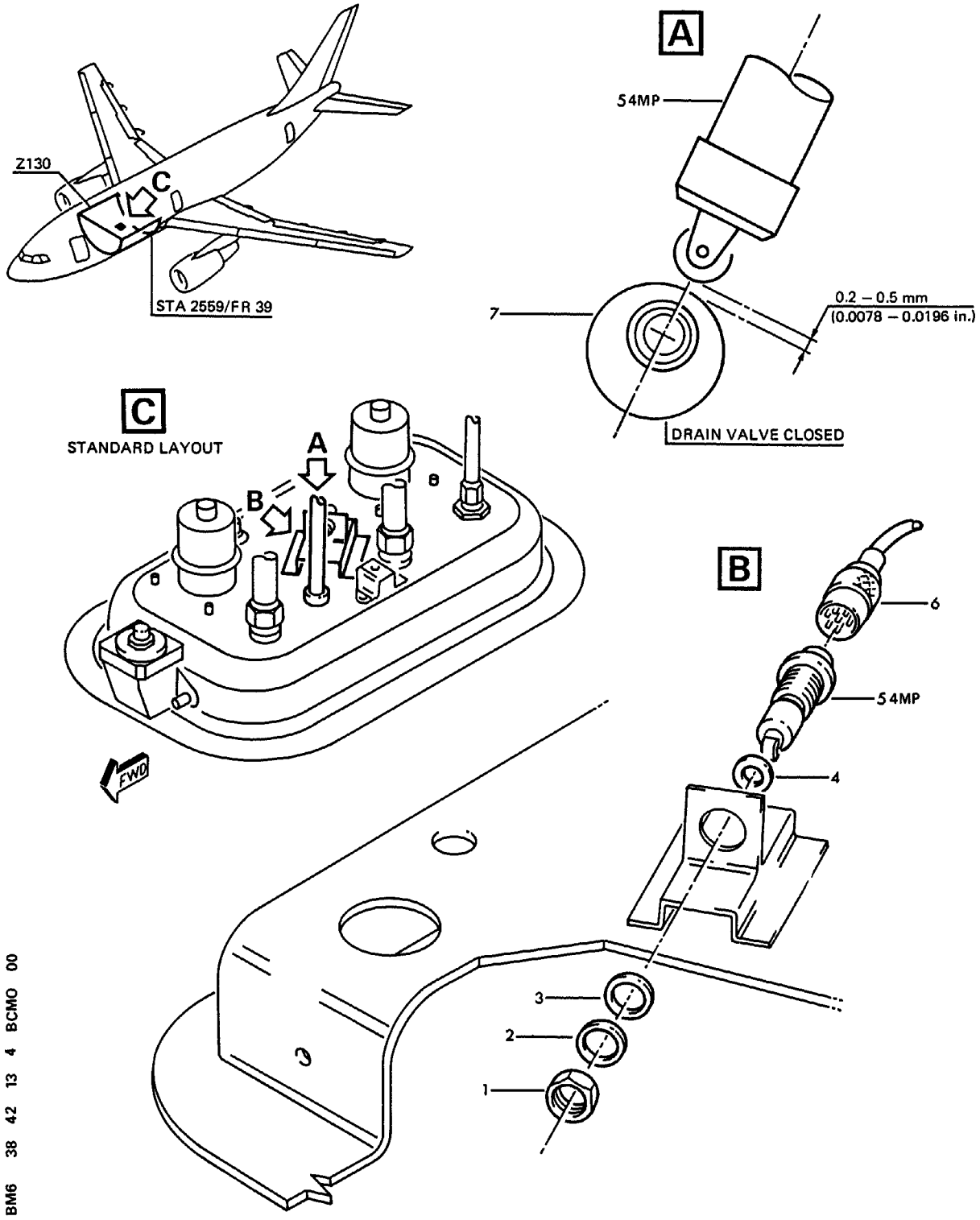
(2)Open service panel 136BR.
(3)Remove access door 136AR.

B. Removal
(1)Microswitch 10MA
(Ref. Fig. 401)
(a)Disconnect electrical connector (1).
(b)Remove lockwire, nut (5), lockwasher (4) and locating washer (6).
(c)Remove microswitch (2) and discard O-ring (3).
(2)Microswitch 4MP
(Ref. Fig. 402)
(a)Disconnect electrical connector (6).
(b)Remove lockwire, nut (1), lockwasher (3) and locating washer (2).
(c)Remove microswitch (5) and discard O-ring (4).

C. Installation
(1)Microswitch 10MA
(Ref. Fig. 401)
(a)Install microswitch (2) and new O-ring (3) in service panel.
(b)Install locating washer (6), lockwasher (4) and nut (5).
(c)Tighten nut (5) and secure using lockwire.
(d)Connect continuity tester to pins A and C of switch. Tester indicates continuity.
(e)Loosen locknut (7) on switch operating bolt (8) of service panel 136BR and adjust until switch just operates. Tester indicates open



Microswitch - 10MA
Figure 401



Microswitch - 4MP
Figure 402

circuit (door closed).
(f)Screw out operating bolt (8) 1 + 0.5 mm (0.04 + 0.019 in.) and safety with locknut (7).
(g)Disconnect tester from pins A and C and remove tester.
(h)Connect electrical connector (1).

(2)Microswitch 4MP
(Ref. Fig. 402)
(a)Install microswitch (5) and new O-ring (4) in bracket.
(b)Install locating washer (3), lockwasher (2) and nut (1).
(c)Tighten nut (1) and secure using lockwire.
(d)Check, with drain valve closed, clearance between roller of microswitch (5) and switch cam (7) is 0.5 mm (0.019 in.).
(e)Adjust switch cam (7), if required (Ref. 38-11-13, P. Block 401).
(f)Connect continuity tester to pins A and C of switch. Tester indicates continuity.
(g)Check operation and function of microswitch by selecting drain valve open and close.
(h)Disconnect tester from pins A and C and remove tester.
(j)Connect electrical connector (6).

D. Test
(1)Remove safety clips and tags and close circuit breaker 1MA.
(2)Connect electrical ground power unit and energize aircraft electrical network (Ref. 24-41-00, P. Block 301).
(3)Operate service panel 136BR and drain valves and ensure microswitches operate correctly.

E. Close-Up
(1)Make certain that working area is clean, and clear of tools and miscellaneous items of equipment.
(2)Close service panel 136BR.
(3)Install access door 136AR.